

# BCA Software Installation and Troubleshooting Guide

This document contains four components:

- *Prerequisites* – provides the list of prerequisites and system requirements to successfully install and run the BCA software.
- *Download the BCA Software* – provides detailed instructions for downloading the software.
- *Install the BCA Software* – provides detailed instructions for installing the BCA software for both Windows XP and Vista.
- *Troubleshooting the Installation and Operation of the BCA Software* – provides assistance diagnosing and correcting problems installing and running the BCA software.

## ***Prerequisites***

You need to have *full local administrative rights* on the computer on which you will install the software, or have someone who has adequate rights perform the installation for you.

The following are the minimum system requirements to run the BCA software successfully:

### **32-bit Processor**

1-gigahertz (GHz) or faster processor recommended

### **Framework**

.NET (“dot NET”) Framework 2.0  
SQL Server Express, Service Pack 2

If the above items are not already installed, the BCA installation program will attempt to install them.

### **Operating System**

Windows XP with Service Pack 2 or later  
Vista (32-bit or 64-bit)

### **Memory**

1 gigabyte (GB) minimum; 2 or more recommended

### **Hard Disk**

Approximately 600 MB of available hard-disk space for the recommended installation

### **Display**

Super VGA (1,024x768 pixels) or higher-resolution video adapter and monitor

### **Other Requirements**

- Microsoft Internet Explorer 6.0 Service Pack 1 or later
- PDF reader, such as Adobe Reader 7.0 or later
- An unzip utility

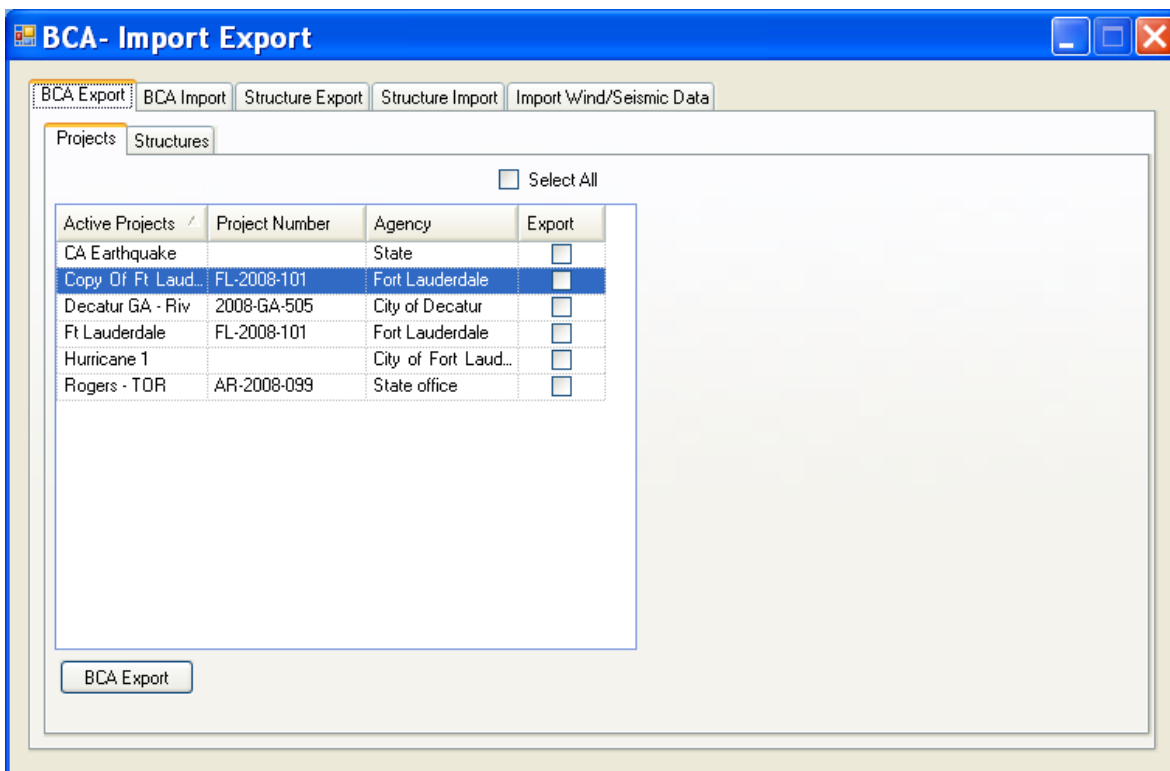
## Prepare to Install the BCA Software

This section provides instructions for:

- Exporting projects and structures from the old version of the BCA software in preparation for using them in the new software
- Downloading the BCA software and (if necessary) the hazard data needed to create Earthquake and Hurricane Wind mitigation projects

### Export Projects and Structures

1. If you are upgrading from an earlier release of the BCA software, export any projects or structures you created that you wish to continue working on in the new version of the software. To export, click on the **Import/Export** icon shown below and select the projects to be exported:

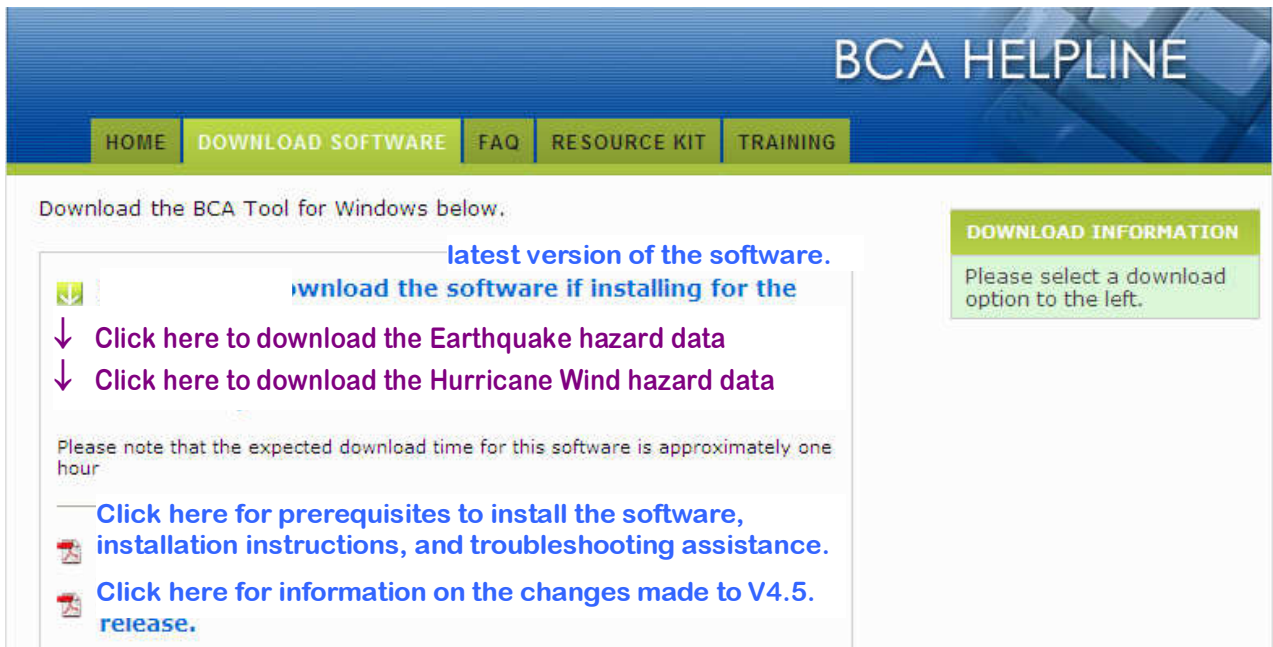


2. Repeat this process for structures if you wish to export any structures that are not already associated with the projects you exported.

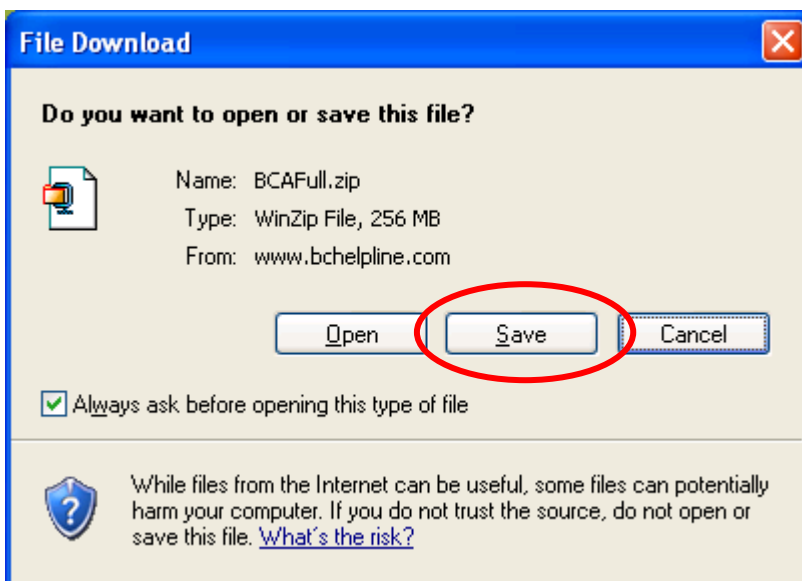
**Note:** You do not need to uninstall the old version of BCA software unless you wish to free up disk space. If you prefer to uninstall it, be sure to export *all* the projects and structures you want to keep because they will be deleted during the uninstall process.

## Download BCA Software (and Hazard Data, if needed)

1. Go to <http://www.bcahelpline.com/index.html> and click on the Download Software tab. Log in (if you do not have a login on the website, you will need to register first). Then click the link **Click here to download the latest version of the software.**



2. The following window will be displayed (however, the file name will be different). Choose **Save** to download the file. Accept the default location or specify your preferred location.



3. If you will be doing Earthquake or Hurricane Wind mitigations, you will also need to download the hazard data for the module. Repeat steps 1 and 2, but click on the link to the appropriate hazard data. Make a note of where you save the file as you will need it to import the data later.

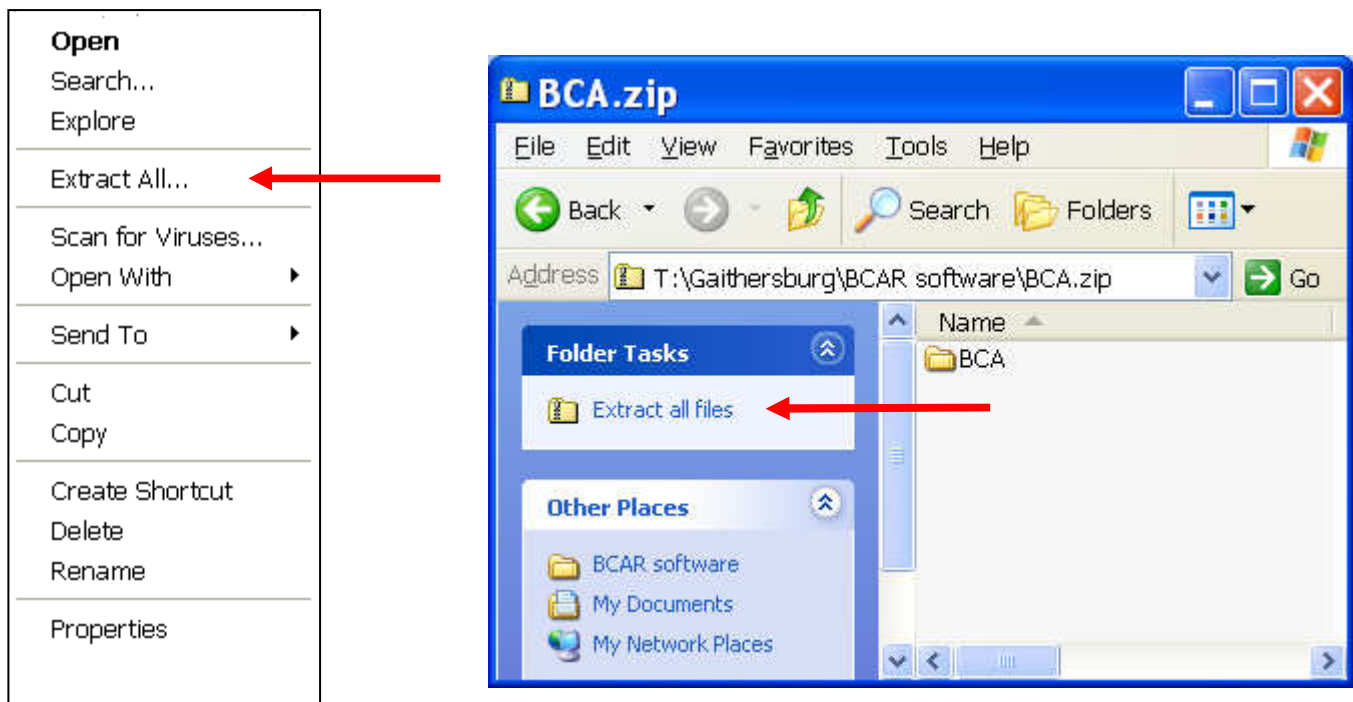
## Install the BCA Software

This section provides instructions for:

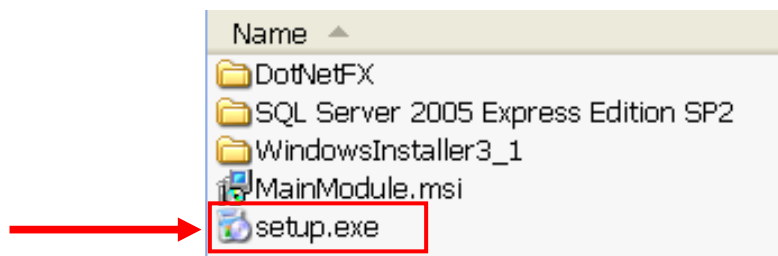
- Installing the BCA software
- Importing projects and structures into the new version
- Importing the hazard data

Before you begin, make sure your system meets all the prerequisites and that you are logged on to the computer with full local administrator rights.

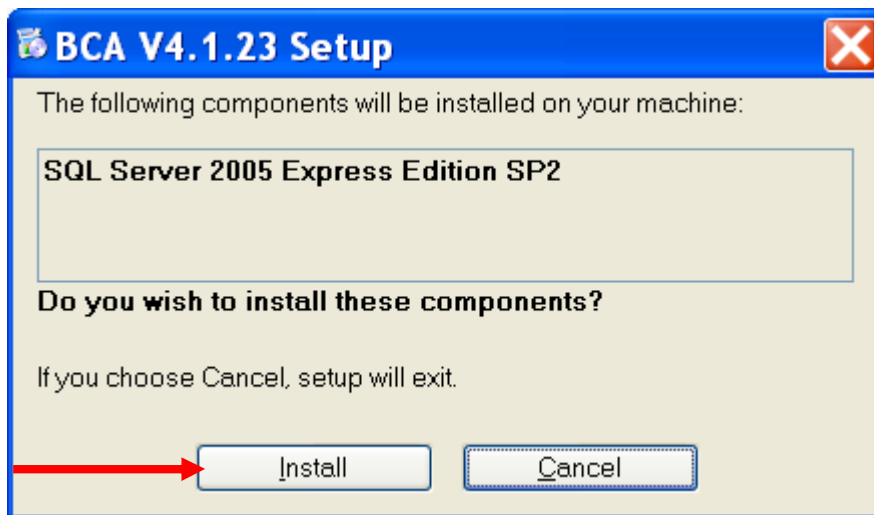
1. Unzip the folder you downloaded from the BCA Helpline Web site. The steps will vary depending on your setup and unzip utility. (In many cases, you can do this by right-clicking and selecting the option **Extract All...**, or by double-clicking the folder and selecting **Extract all files** from the choices on the left, or you may have an unzip utility installed that activates automatically when you click on the folder.)



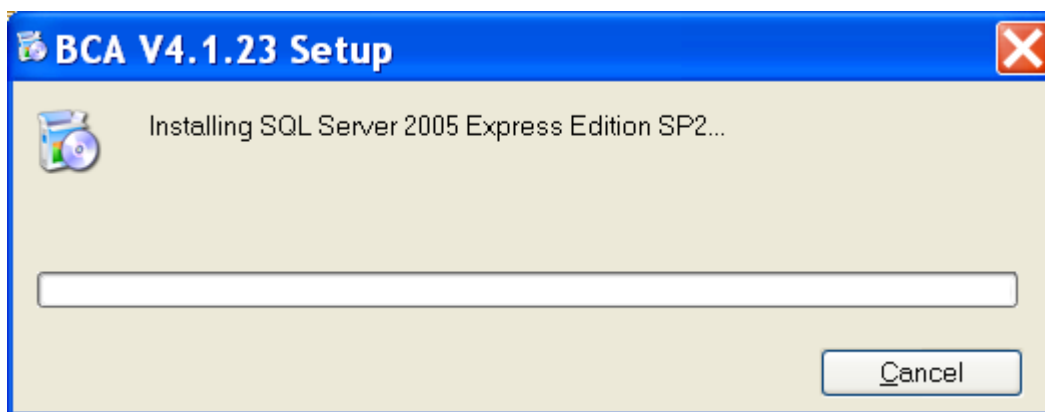
2. Once you have extracted the files, double-click on **setup.exe** to install the BCA software. **Note:** You must have local administrative privileges on your computer to install the software successfully, or have an authorized person install it for you, because this release contains an upgrade to SQL Express. (To perform the upgrade successfully, the installation process must make changes to the system registry. Most users do not have access to do this.)

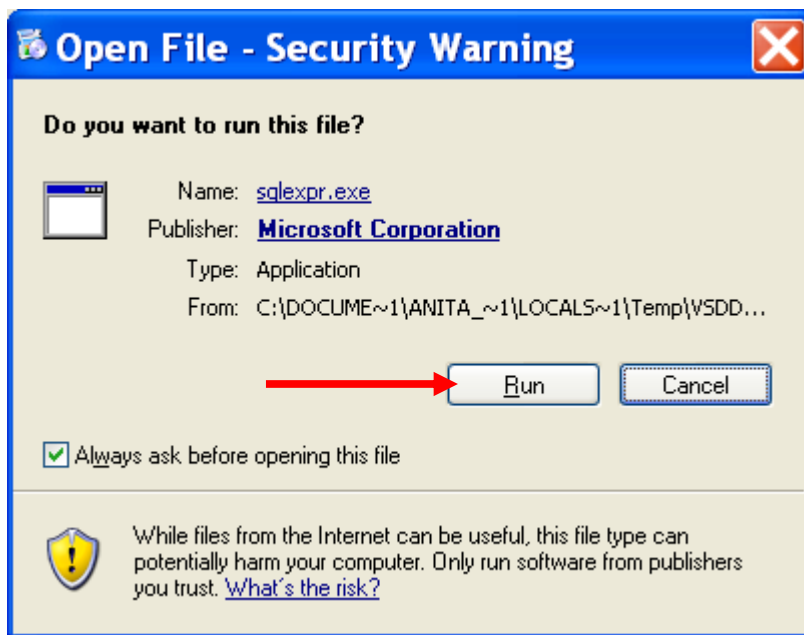


3. A series of screens similar to the following will be displayed. Follow the prompts and accept the default settings.

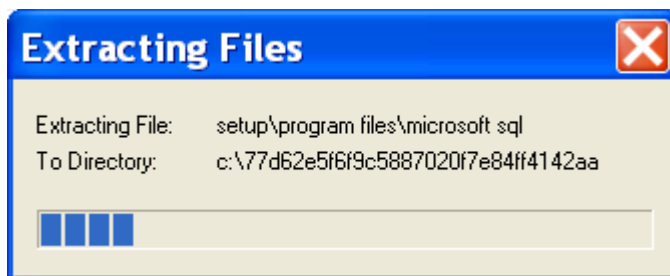


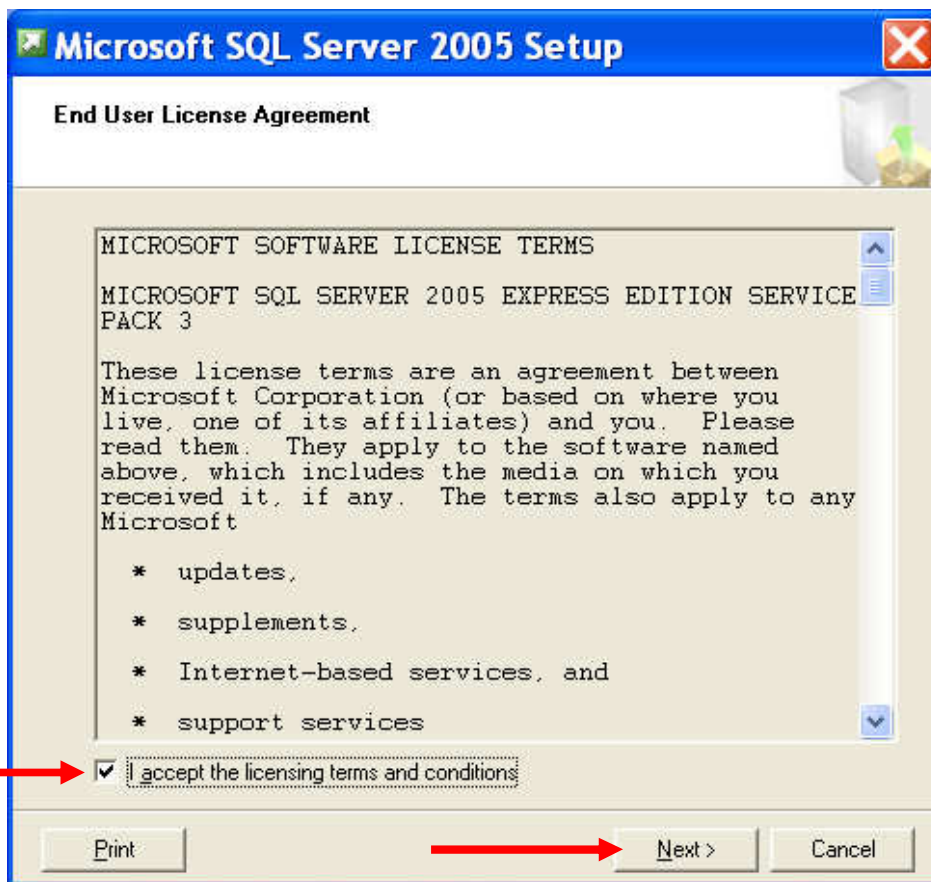
4. Click **Install** to continue.



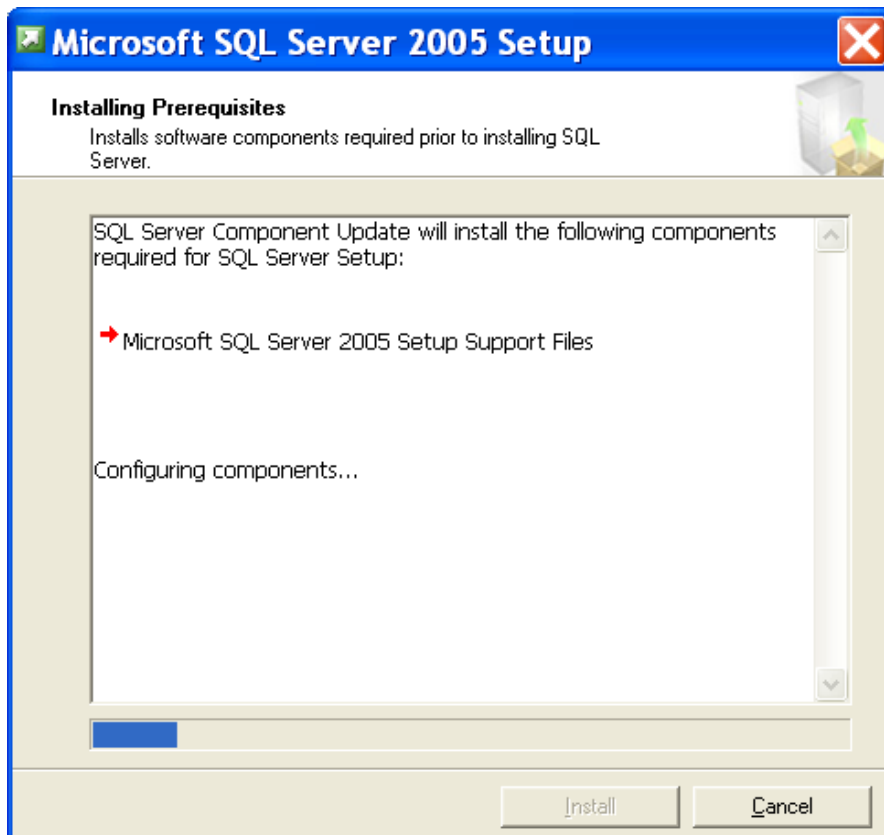


5. Click **Run** to continue.





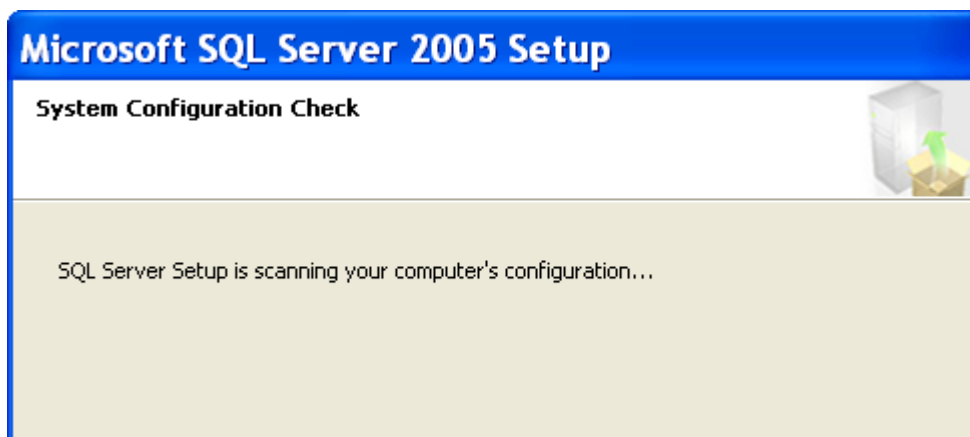
6. Check the box to accept the terms and conditions. Click **Next** to continue.



The setup program will automatically install the prerequisites.



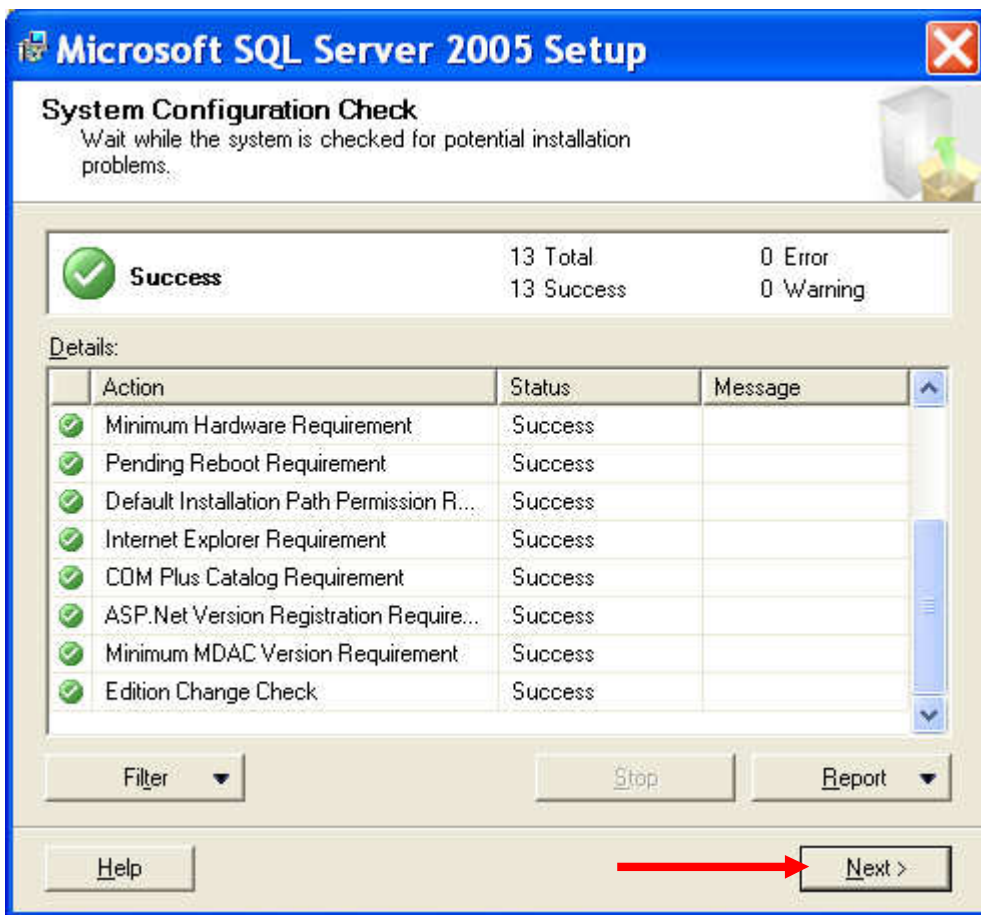
7. Click **Next** to continue.





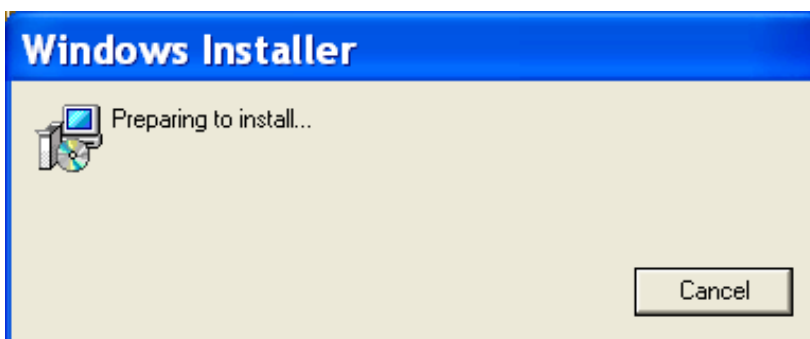


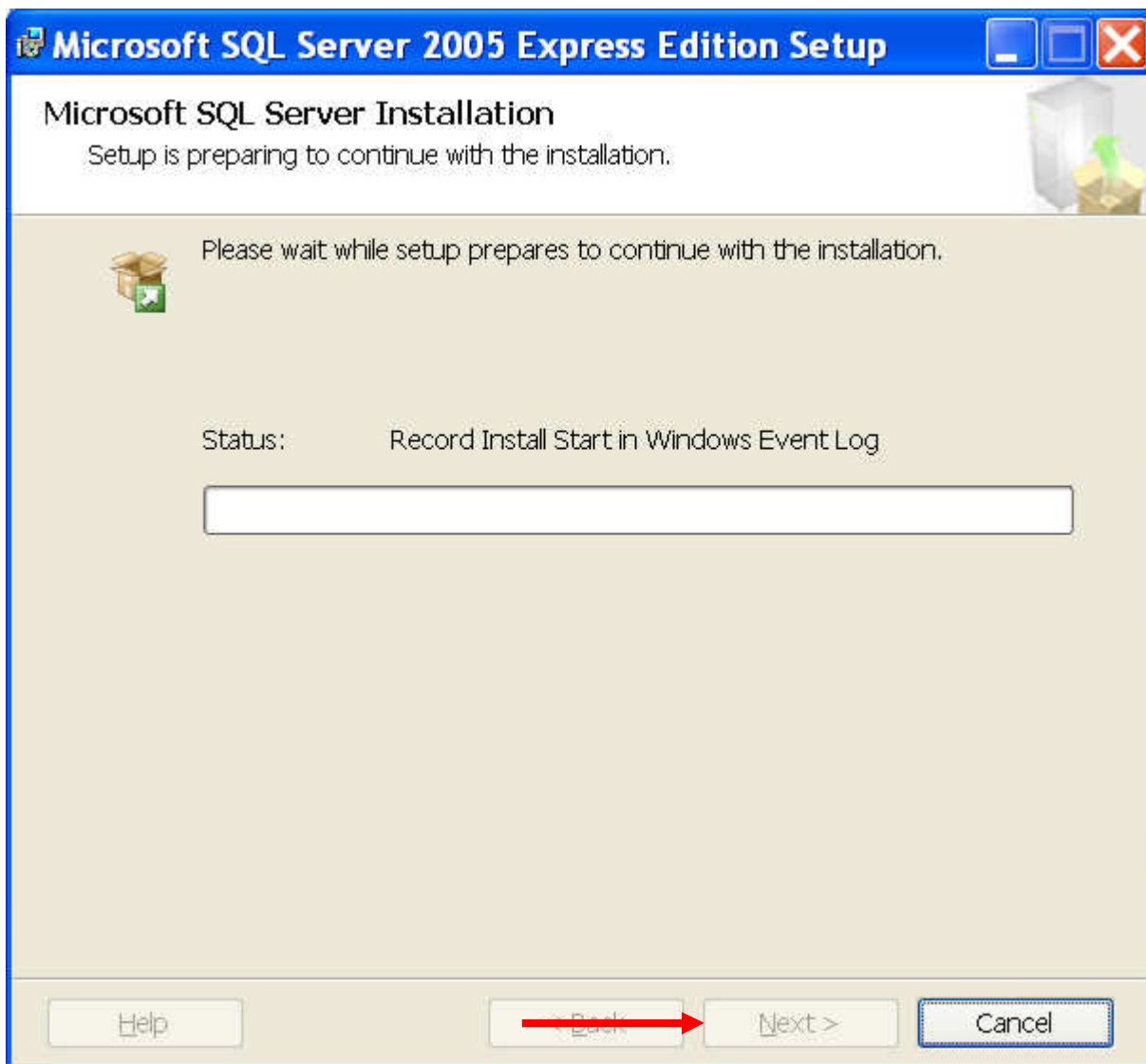
8. Click **Next** to continue.



- When the check is completed and indicated as successful, click **Next**.

If a potential problem is indicated next to any component, take a screen shot to show your IT administrator in case SQL Express is unable to install successfully or the BCA software does not run properly after installation.





10. This window displays messages explaining the status of the installation and shows the progress of the installation with a status bar. When the installation is complete, click **Next**.

**Microsoft SQL Server 2005 Express Edition Setup**

### Registration Information

The following information will personalize your installation.

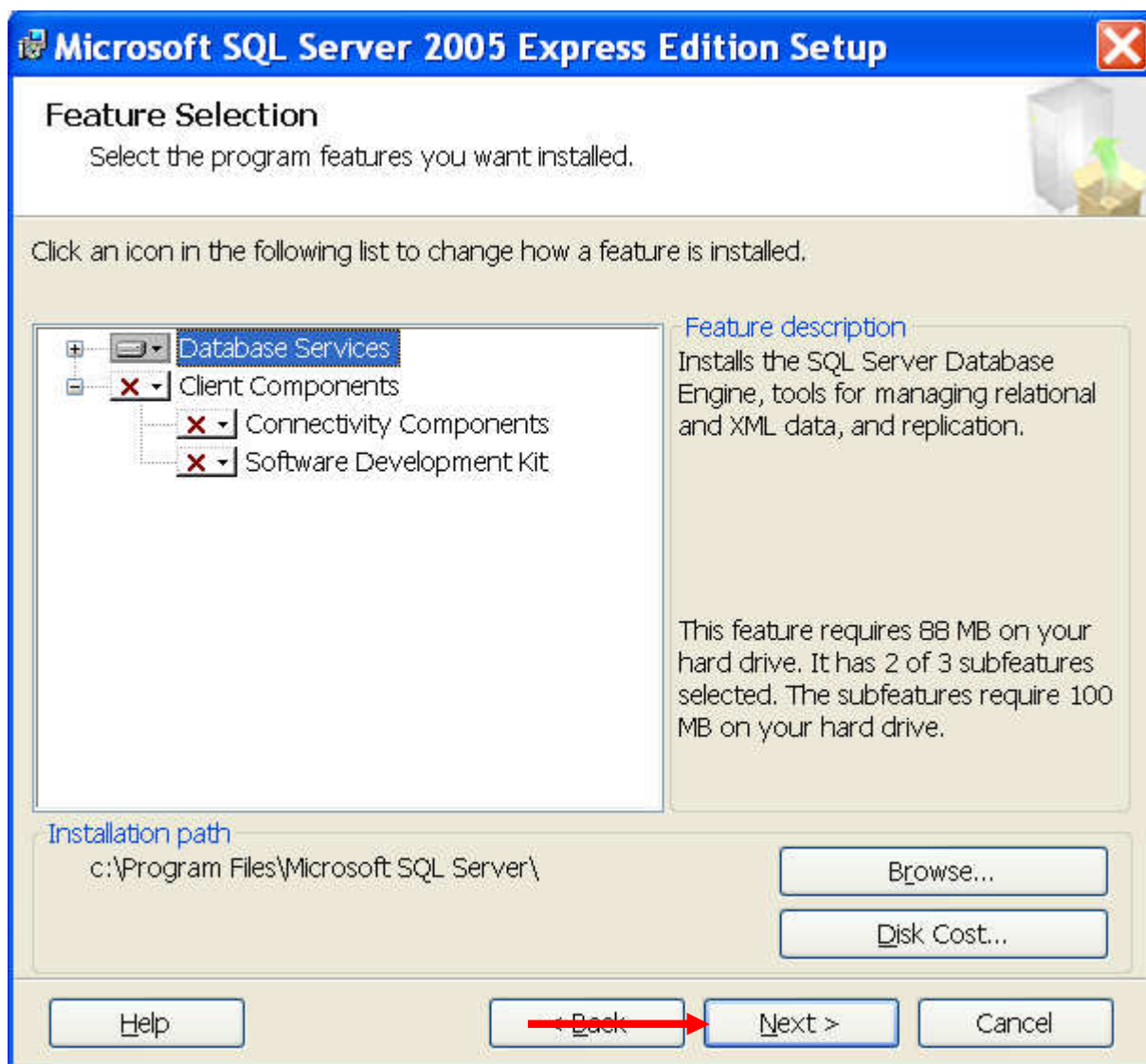
The Name field must be filled in prior to proceeding. The Company field is optional.

Name:

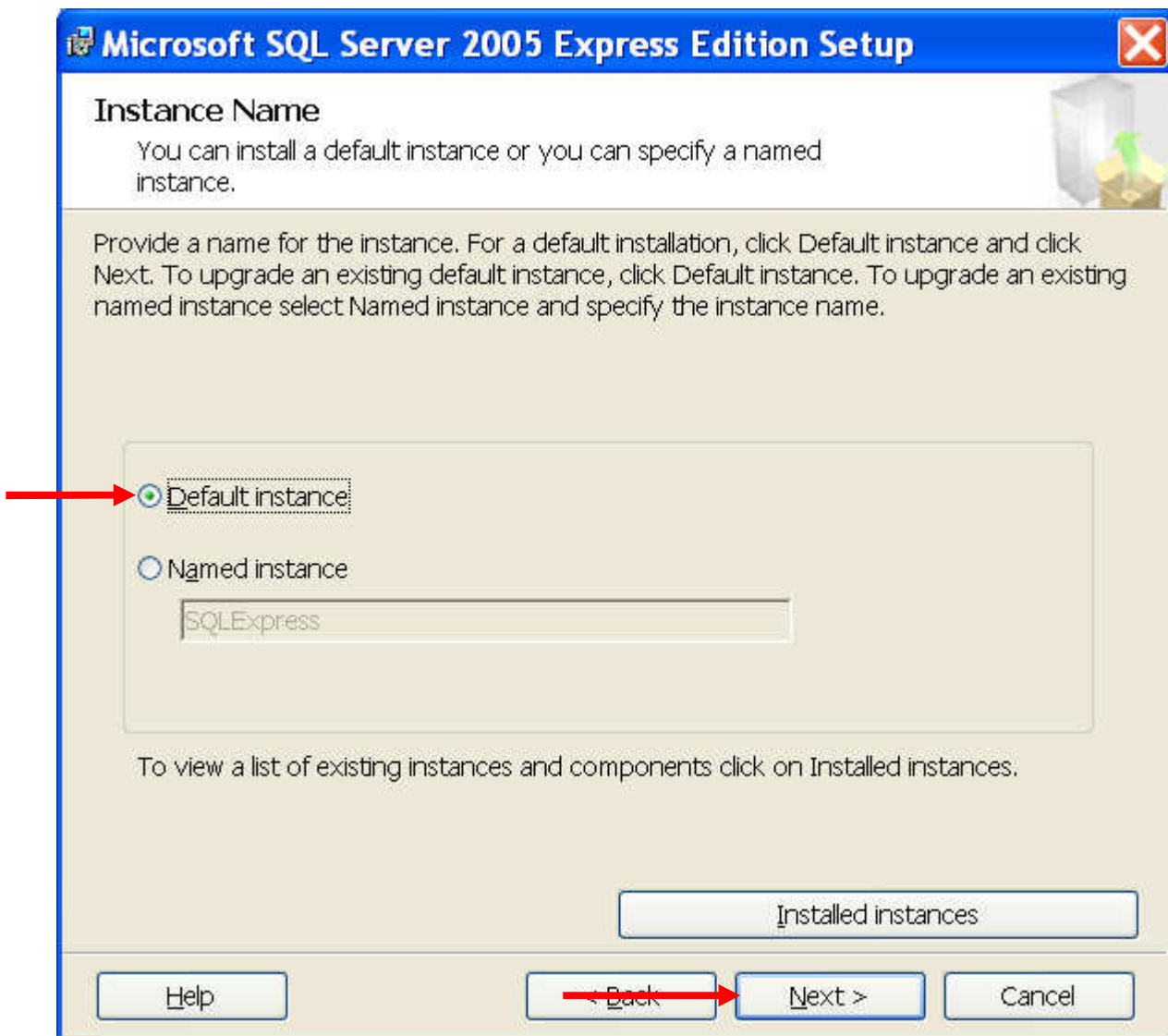
Company:

☒ Hide advanced configuration options

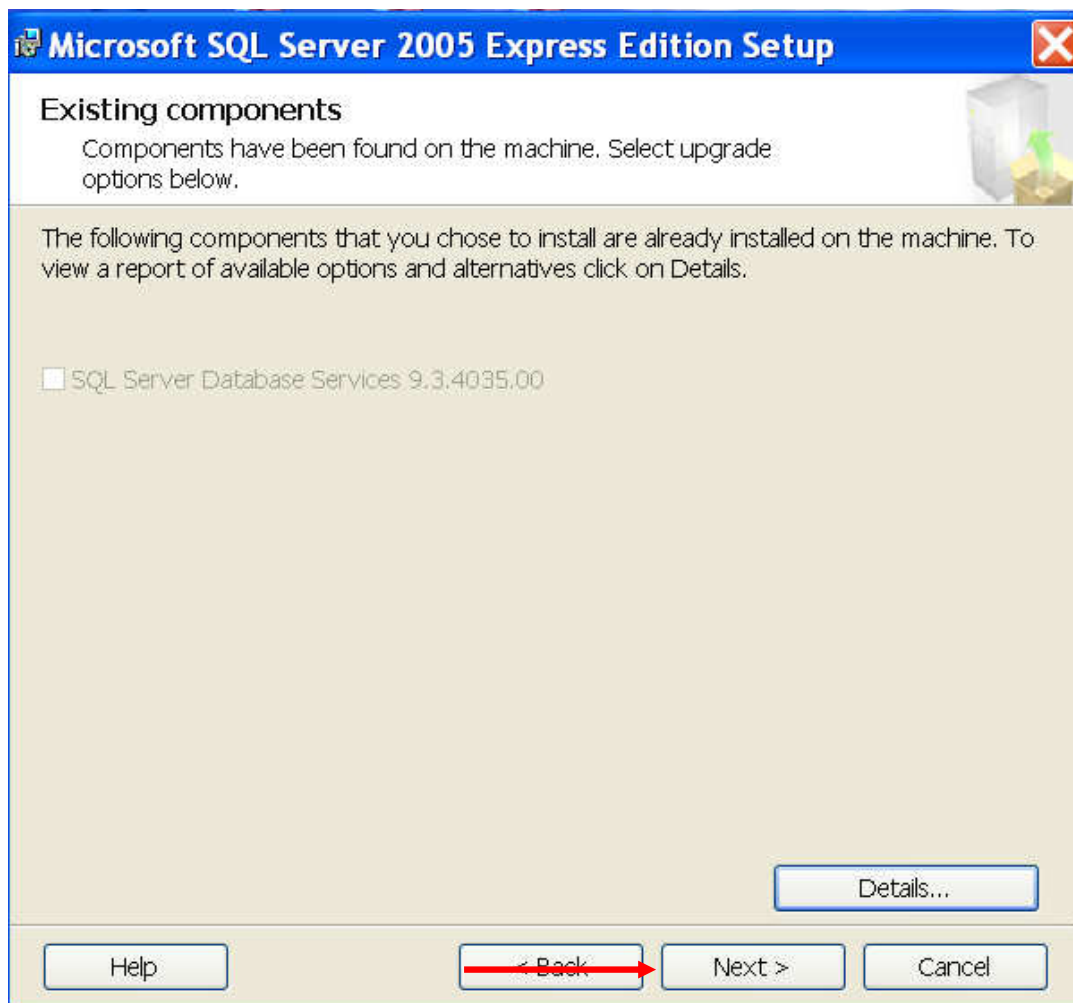
11. Enter your name if it is not already filled in, and then click **Next**.



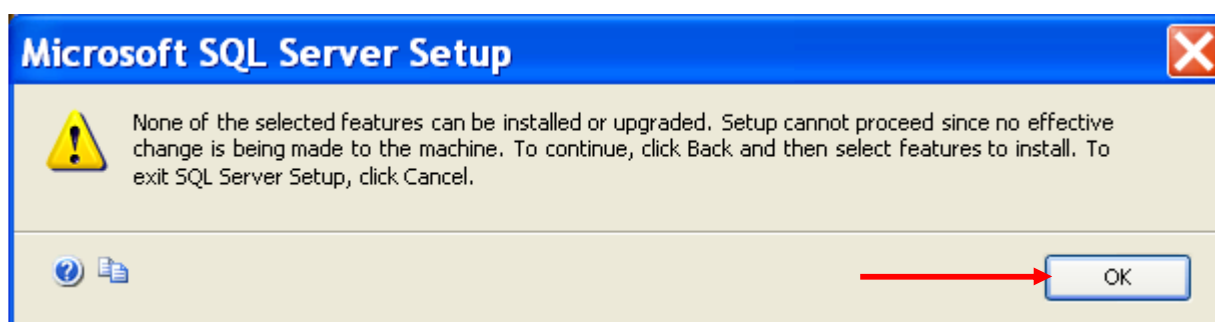
12. Leave the default settings for program features and click **Next**.



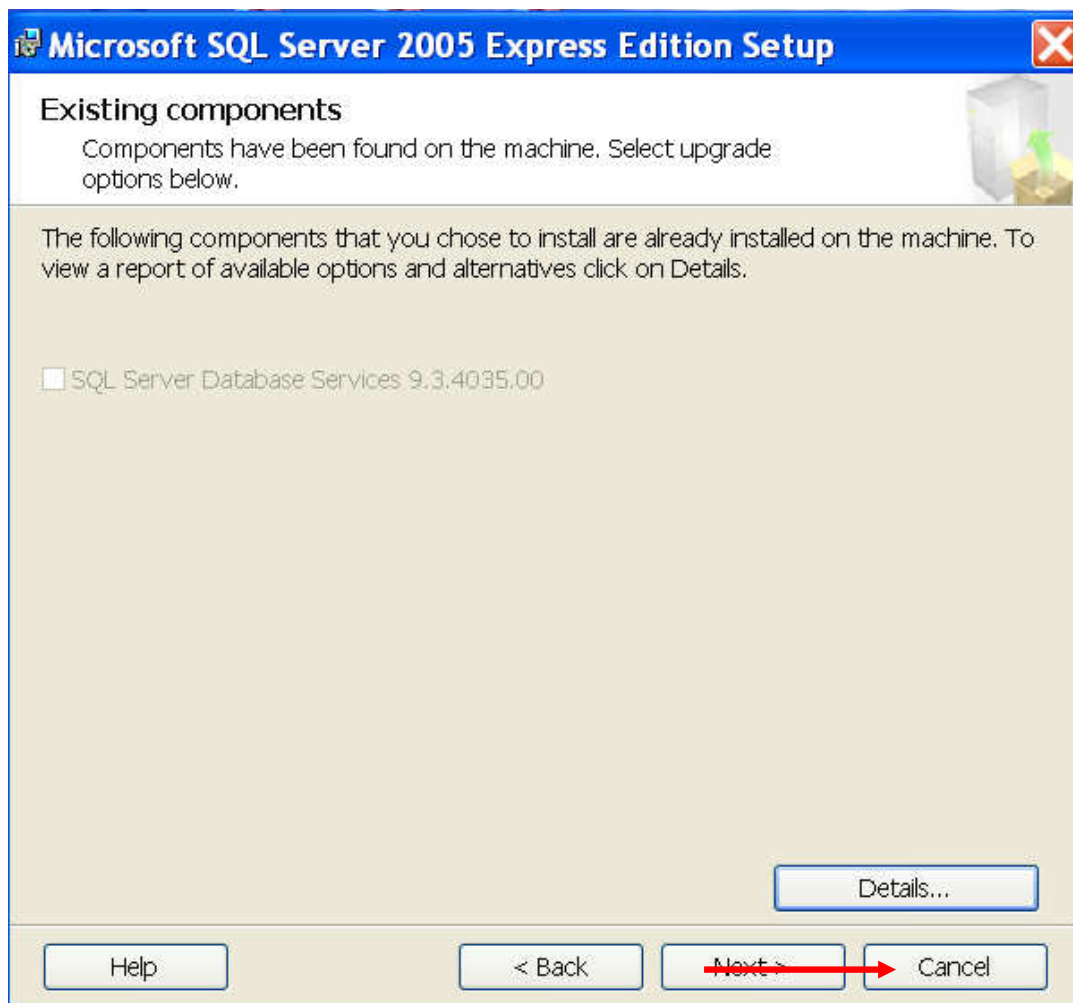
13. Make sure **Default instance** is selected, and then click **Next**. If the following screen is displayed, Microsoft SQL Server 2005 Express is already installed on your computer:



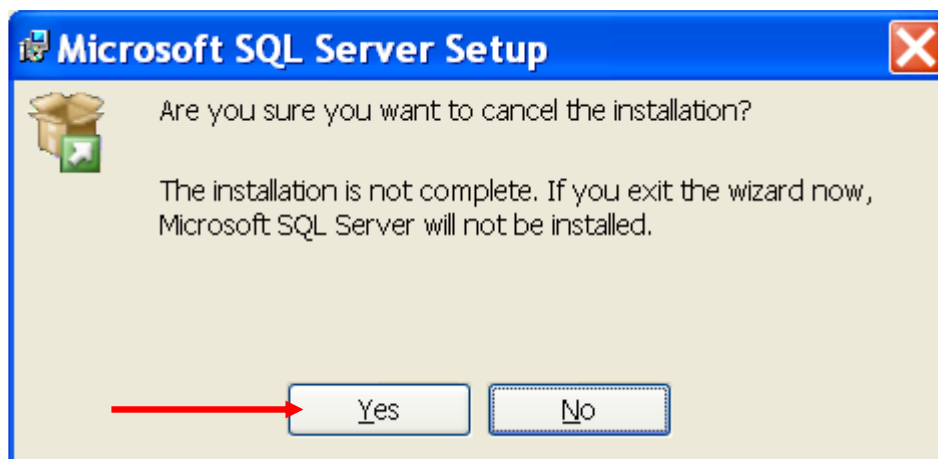
14. If the screen above is not displayed, skip to step 19. If the screen above is displayed, click **Next** to continue.



15. Click **OK**.

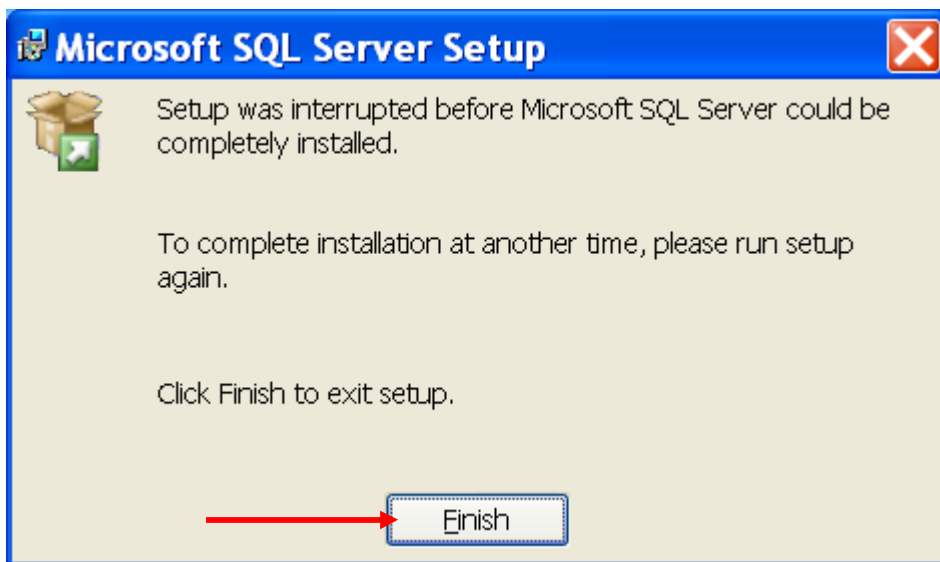


16. Click **Cancel**.



17. Click **Yes**.





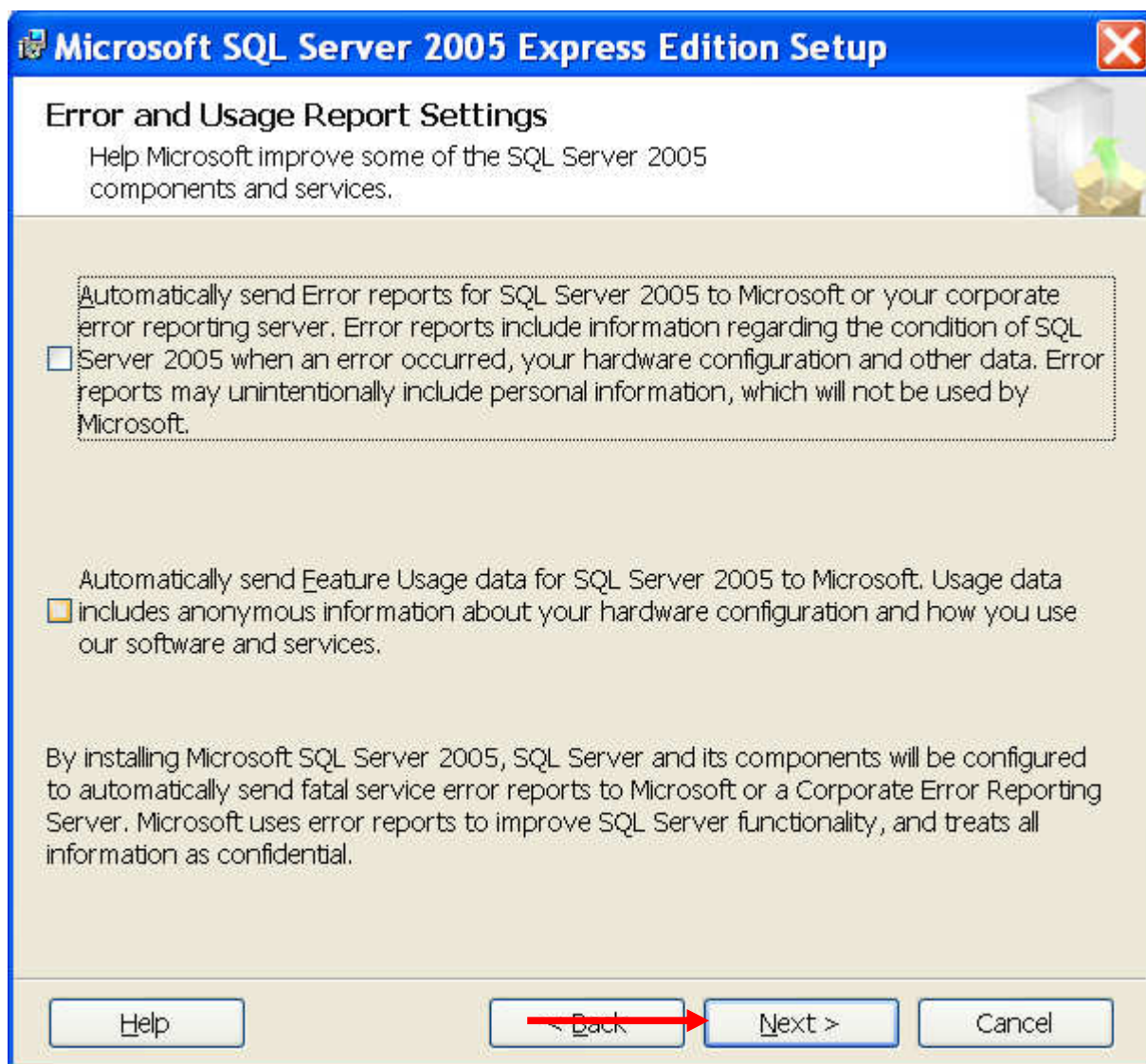
18. Click **Finish**. The BCA software setup will start automatically. Skip to step 24.



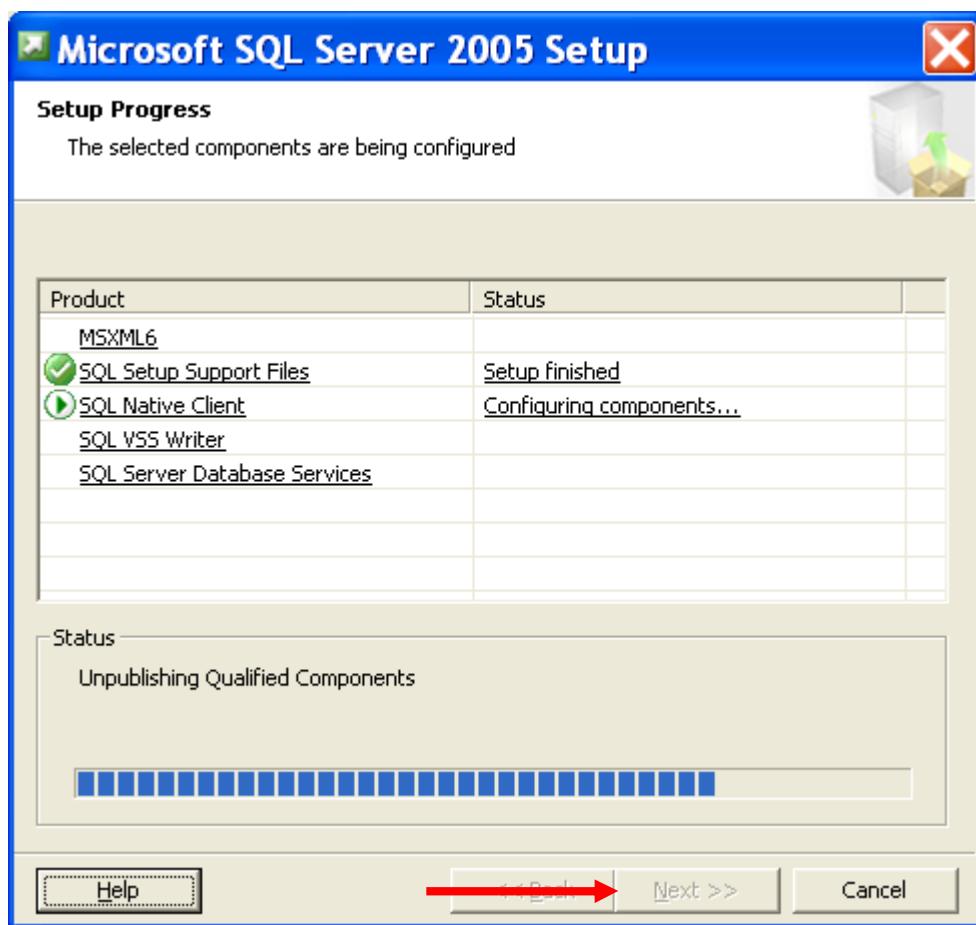
19. Make sure **Windows Authentication Mode** is selected and click **Next** to continue.



20. Make sure only **Enable User Instances** is checked and click **Next** to continue.



21. Leave both boxes unchecked for error and usage report settings and click **Next** to continue.

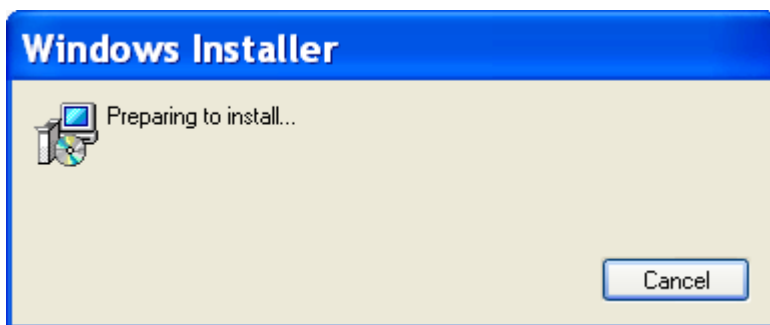


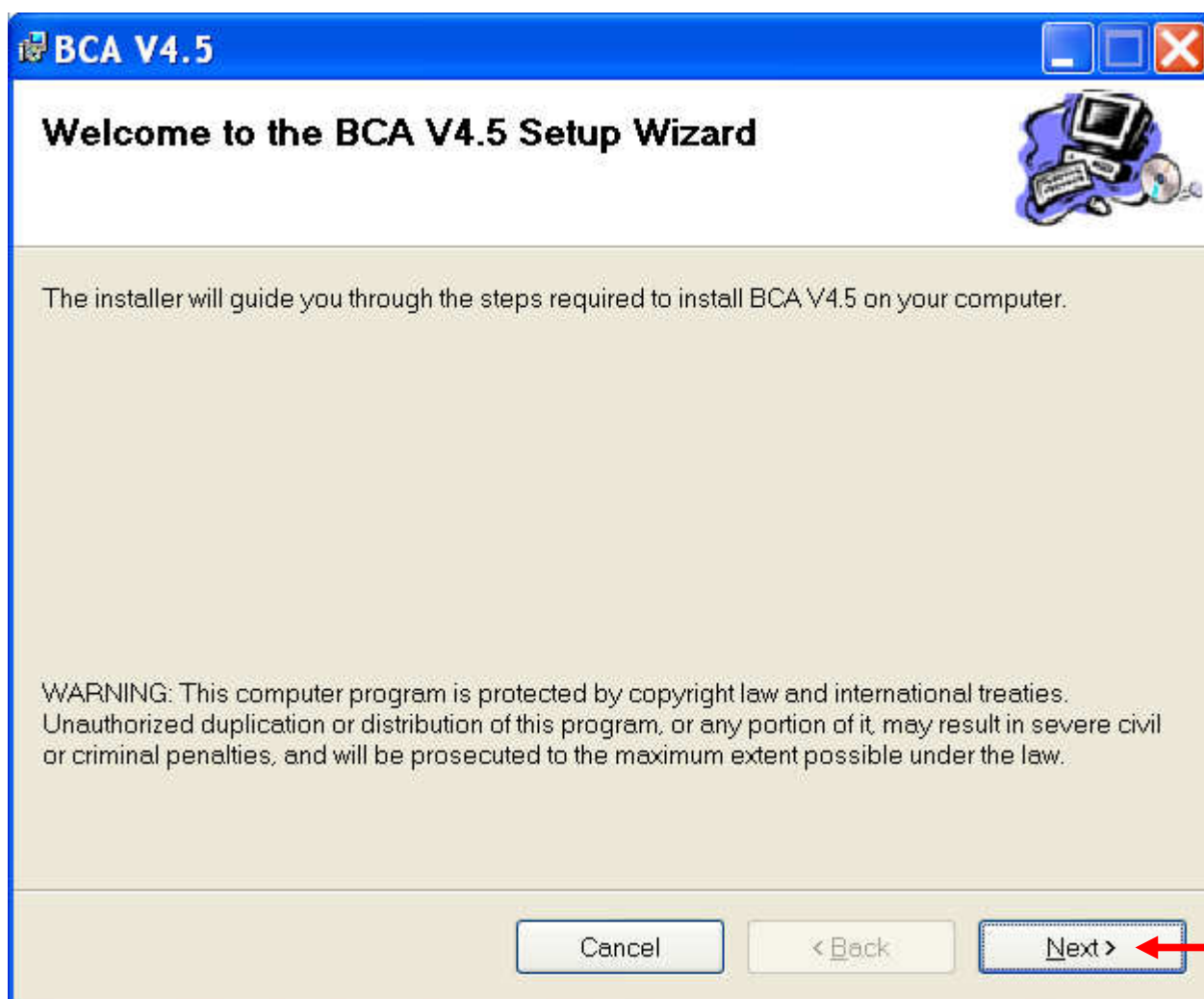
22. The setup program may take several minutes to configure each component. When it is finished, all components should have a green circle with a check inside like SQL Setup Support Files in the screen shot above. Click **Next** to continue.

If any products have a red circle with an "X" inside, the setup or configuration was unsuccessful for that component. Take a screen shot and see the Microsoft cleanup utility information on page 37 of the Troubleshooting section of this document or contact your IT administrator for assistance.



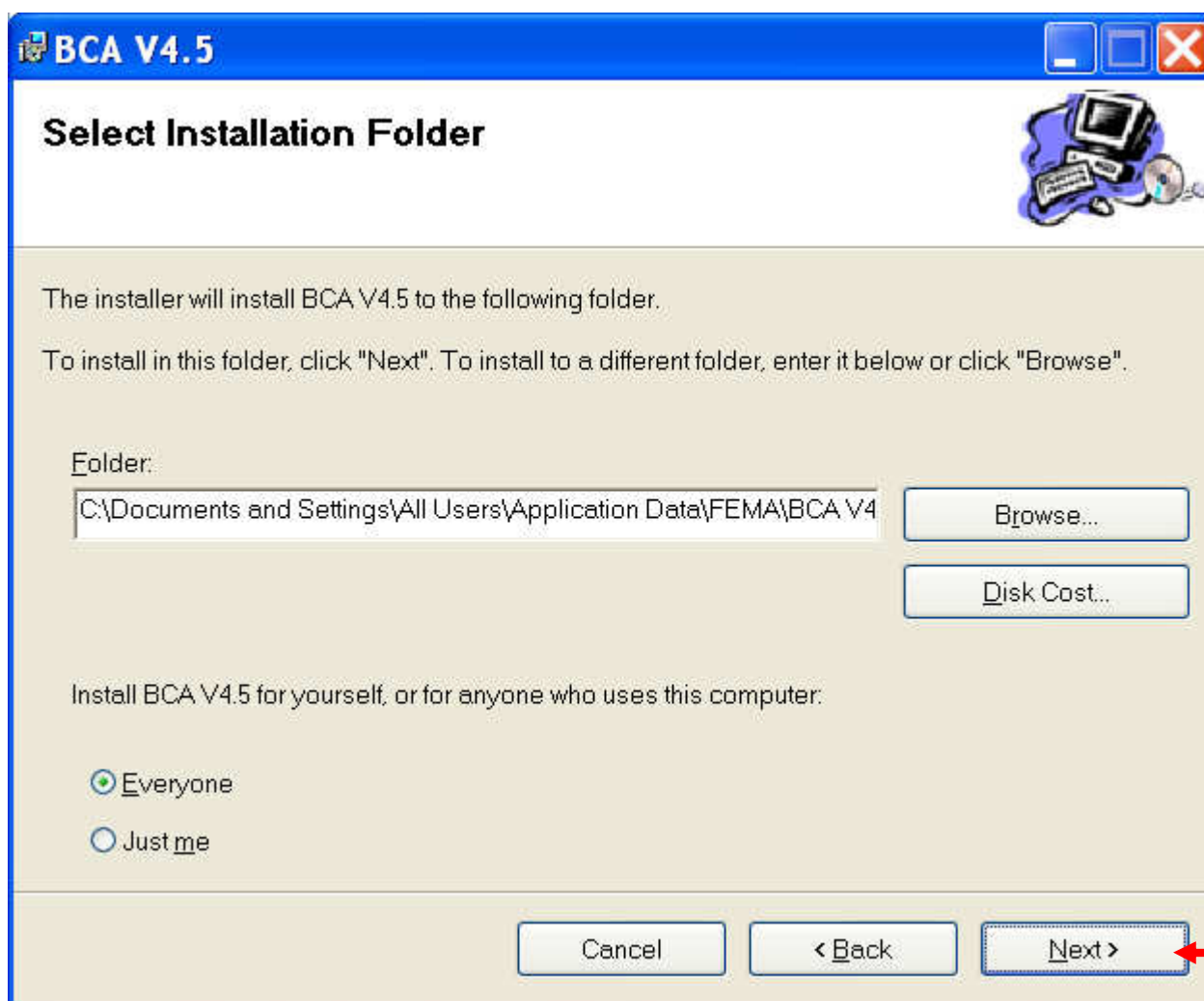
23. Click **Finish** to continue. The BCA installation will begin automatically.





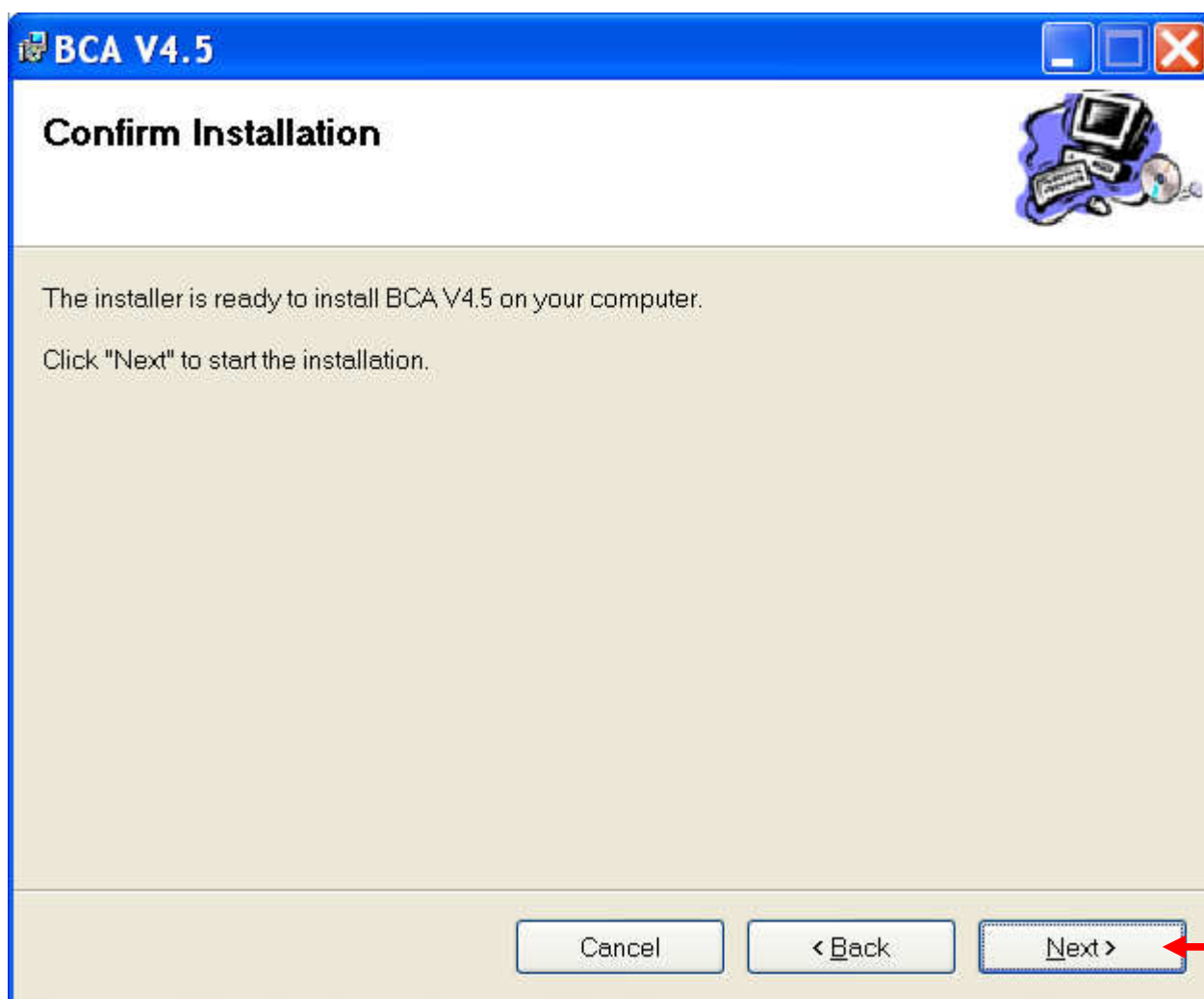
24. Click **Next** to continue.





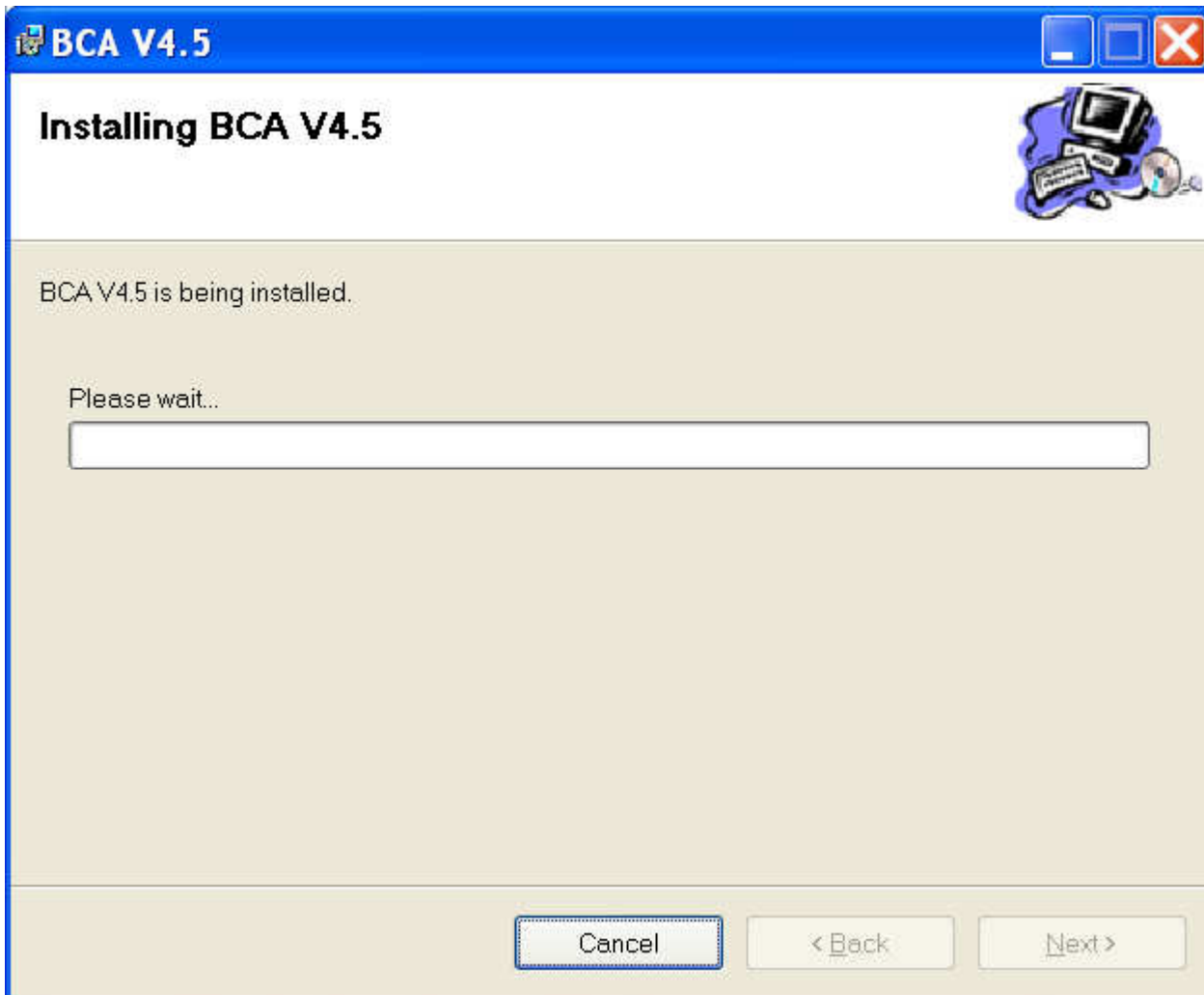
25. The Folder field will be populated with the default location for software installations based on your operating system. Selecting “Everyone” allows anyone who uses the computer to run the BCA software; selecting “Just me” only allows you to run the BCA software. Click **Next** to continue.

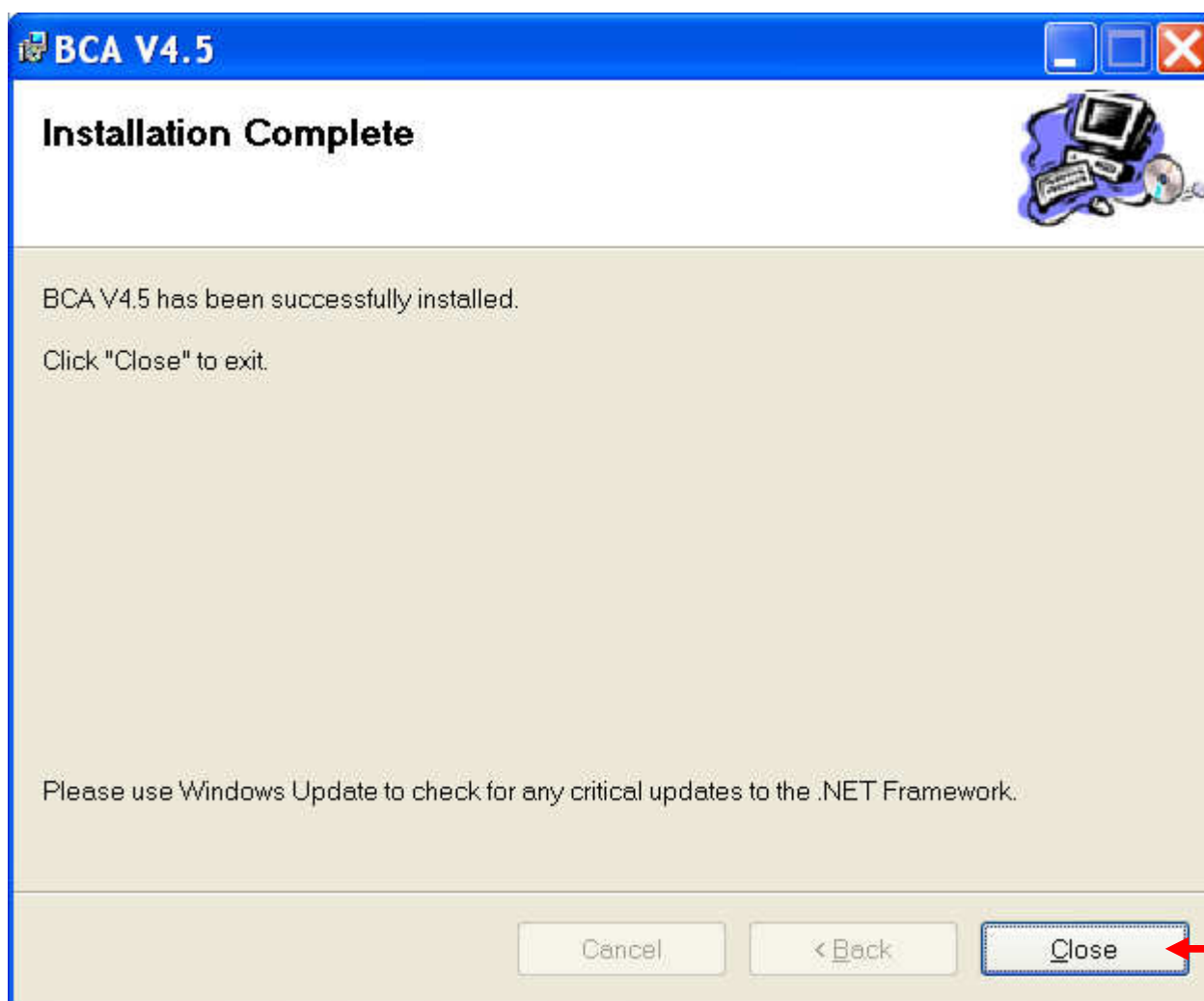
**Note to Vista users:** If you have difficulty proceeding with the installation, you may not have installation privileges on the default program storage folder, C:\ProgramData. Return to this step and enter your own path for the installation, such as C:\FEMA\BCA V4.5



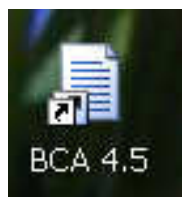
26. Click **Next** to continue.







27. Once the installation is complete, click **Close** and then restart your computer before running the software.
28. The installation process will place a BCA icon similar to the one below on your desktop. Double-click the icon to run the BCA software:



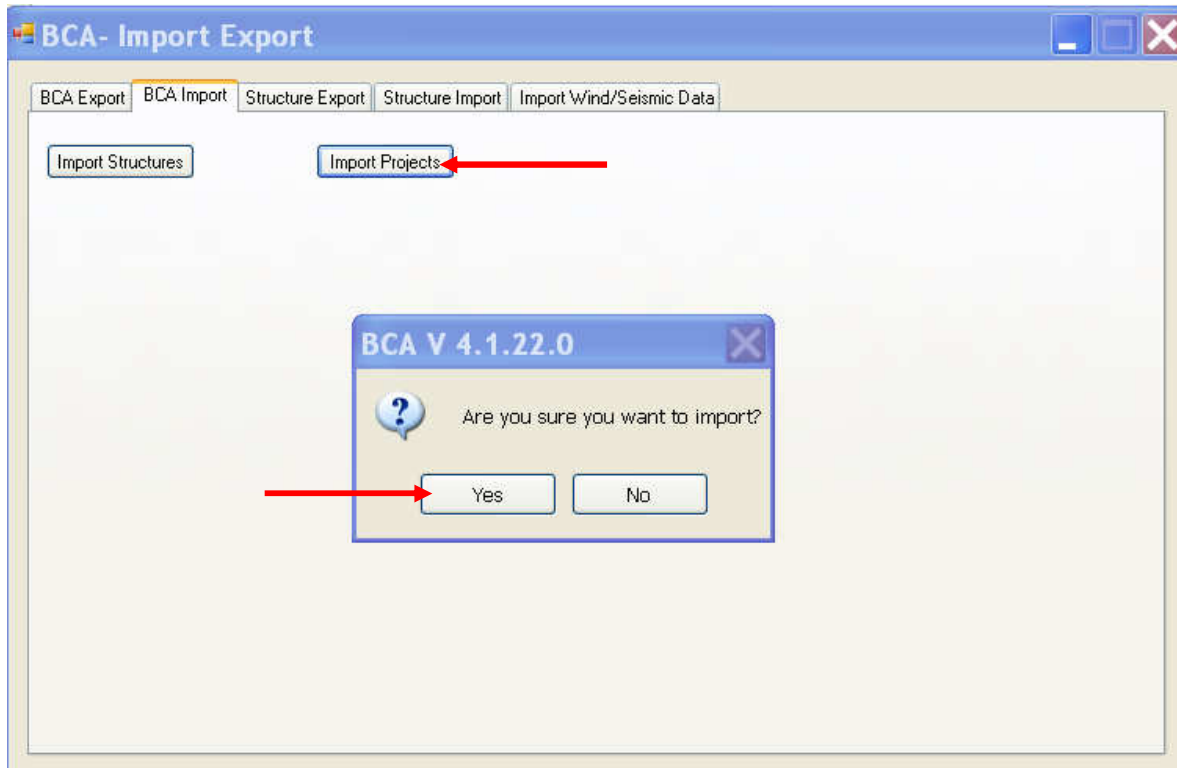
**NOTE:** If you have any IT issues or questions during the installation process, please contact the BC Helpline at [bchelpine@dhs.gov](mailto:bchelpine@dhs.gov). Because local configurations vary greatly, you may need to enlist the help of your local IT support to install the software, and especially to correct any problems with the installation of Microsoft SQL Server Express.

## Import Projects and Structures

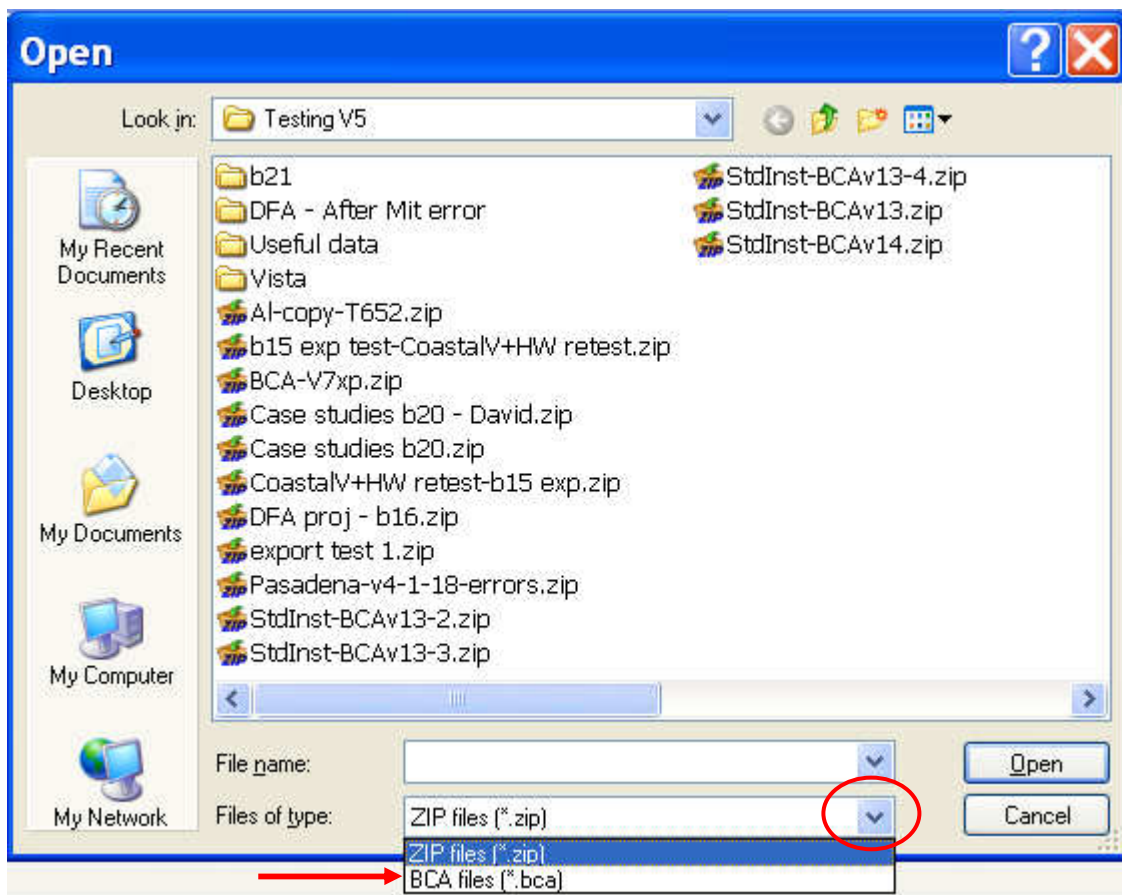
1. To import projects or structures you exported from version 4.1.3 of the software, click on the **Import/Export** icon.



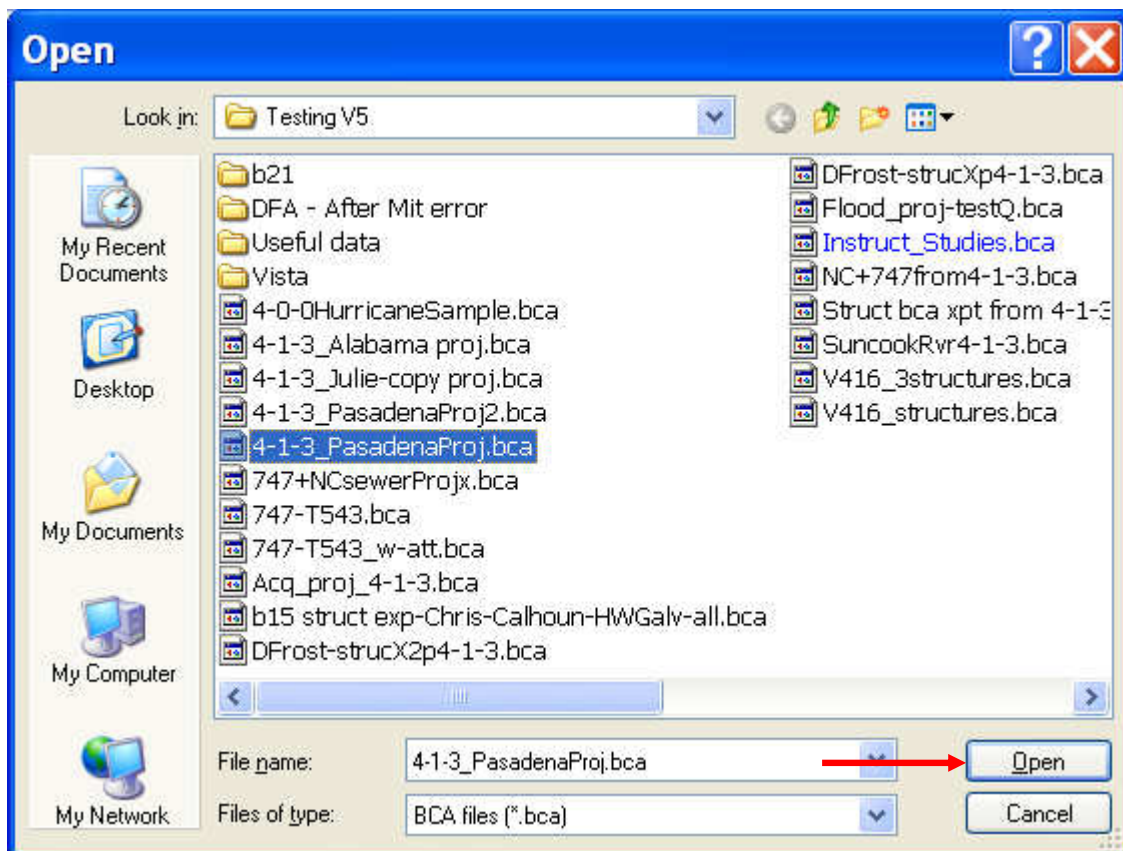
2. When the window below opens, select the **BCA Import** tab.



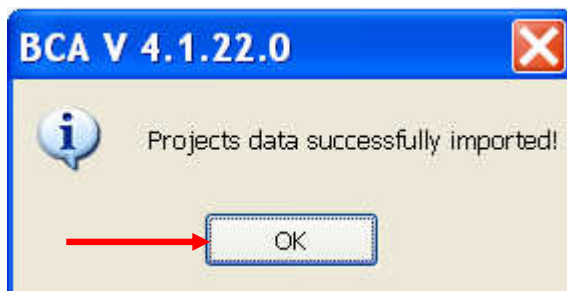
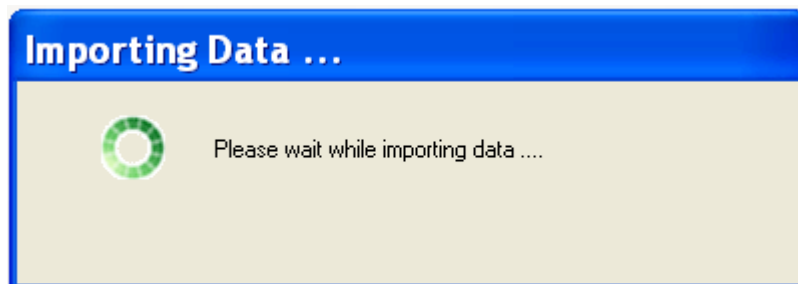
3. Click the **Import Projects** button and answer **Yes** to the prompt.



4. The new version of BCA software exports projects in zip files, so it looks for zip files by default. Click the down arrow in the **Files of type** box and select **BCA files (\*.bca)** from the list.



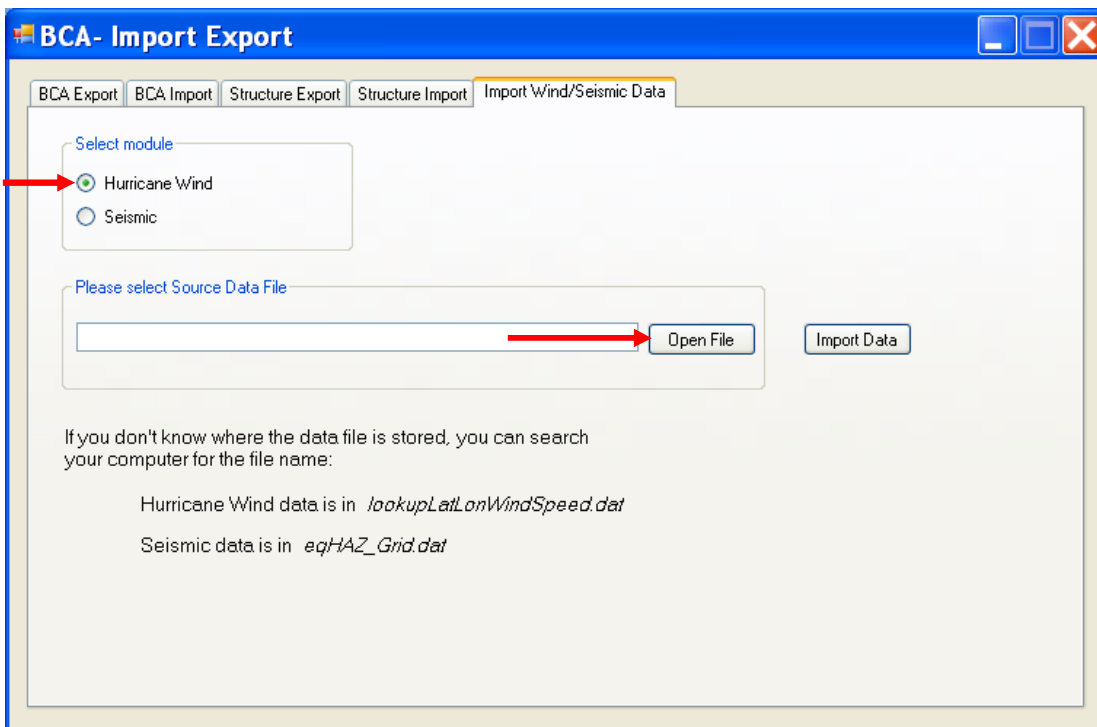
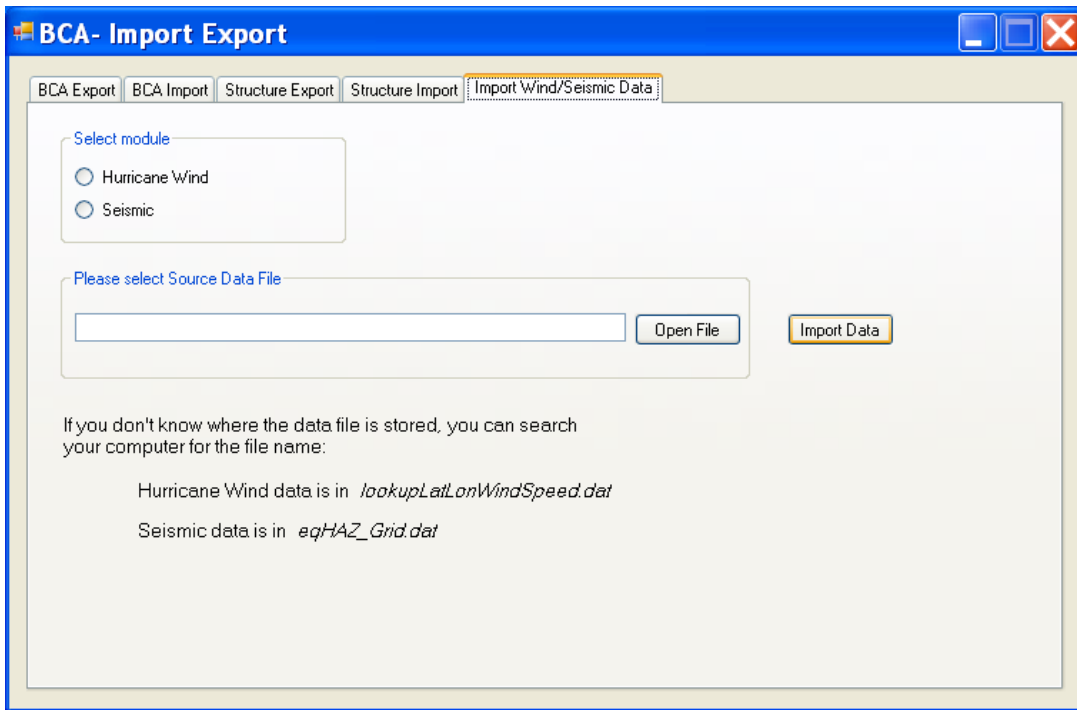
5. Select the file you wish to import from the list of bca files displayed and click **Open**.



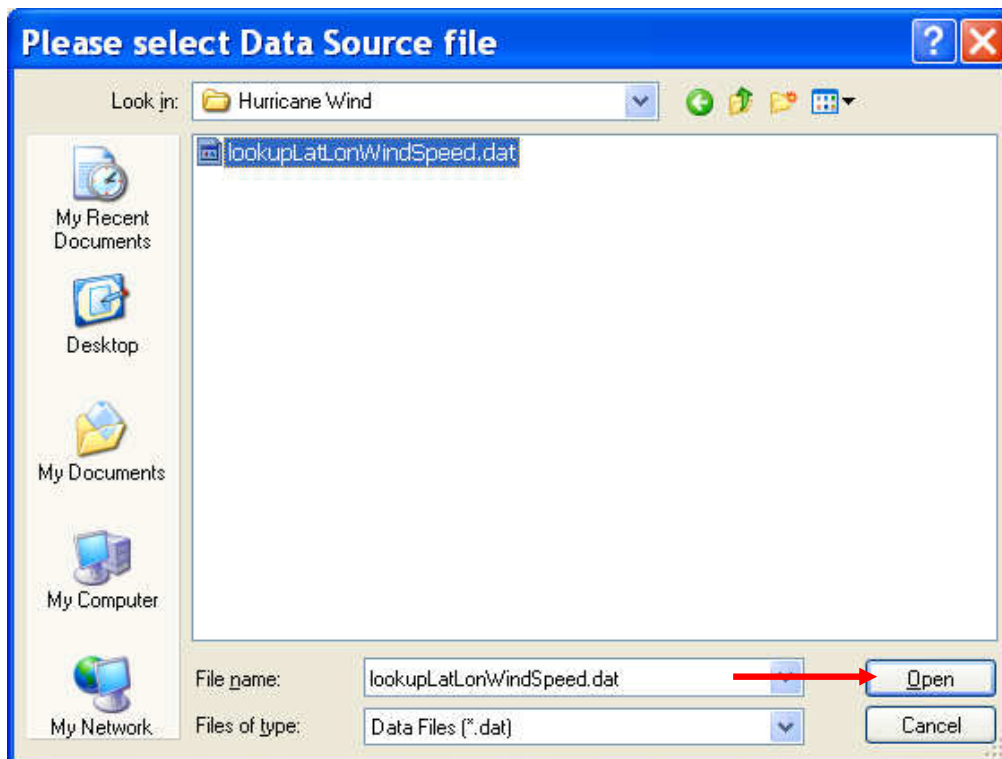
6. A progress window will be displayed, followed by a “successful import” message. Click **OK**.

## Import Hazard Data

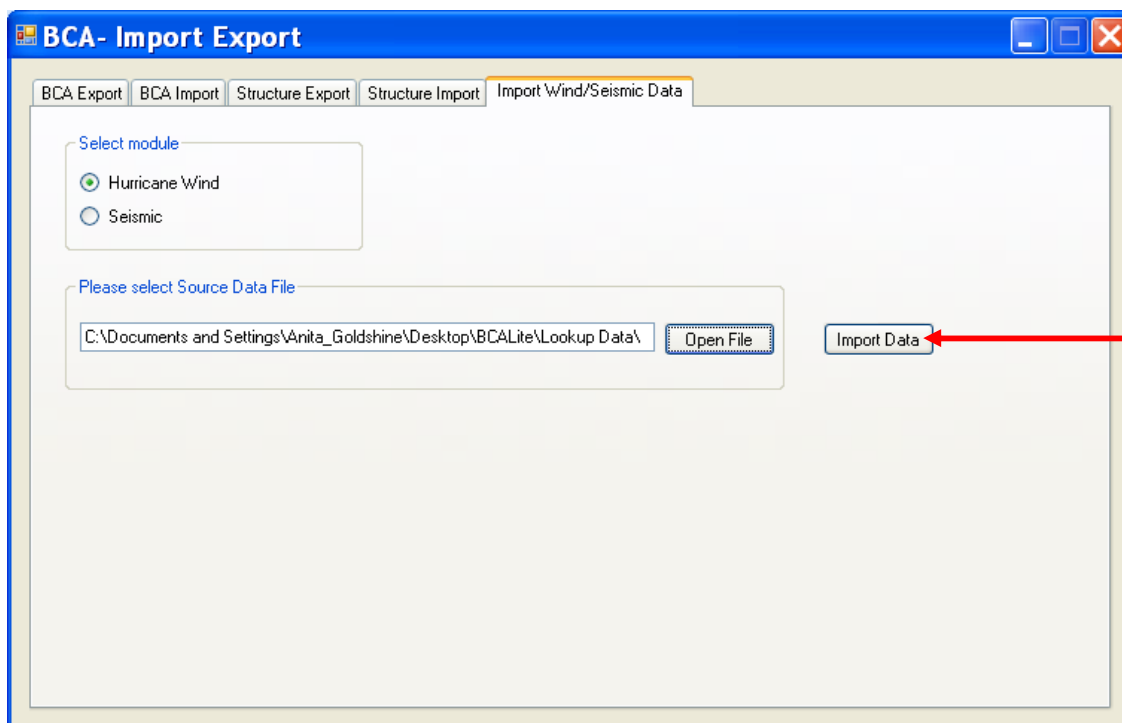
To do a Hurricane Wind or Earthquake mitigation, you will need to import the hazard data for the module to run correctly. To start, click on the **Import/Export** icon and select the Import Wind/Seismic Data tab in the window below.



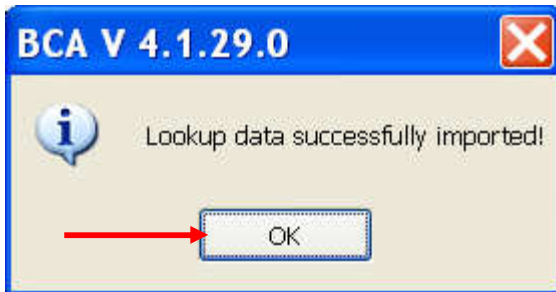
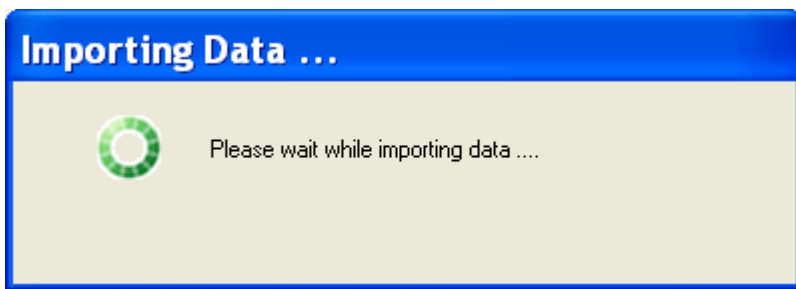
1. Select the module for which you wish to import data, and then click **Open File** to browse for the file. (Refer to the file location where you saved the hazard data when you downloaded it from the BC Helpline Web site.)



2. Open the folder where you stored the data, select the ".dat" file, and click **Open**.



3. When the path and file name show in the Source Data File field, click **Import Data** to import the hazard data to the database.



4. A progress window will be displayed, followed by a "successful import" message. Click **OK** and close the Import/Export window.



## ***Troubleshooting the Installation and Operation of the BCA Software***

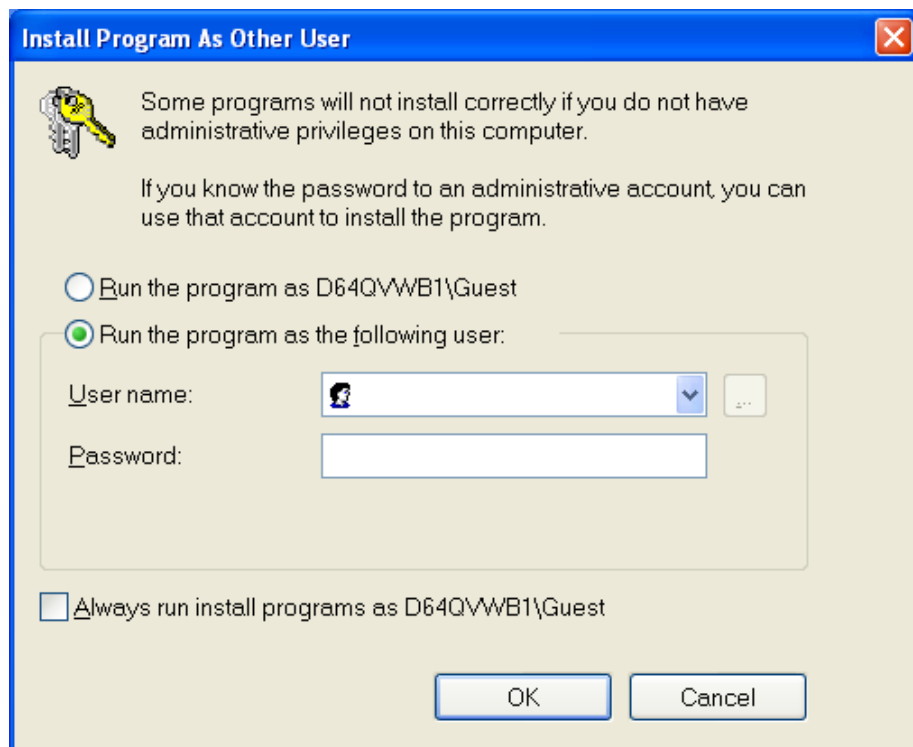
This section provides assistance diagnosing and correcting installation problems and common problems running the BCA software after installation. Topics include:

- I. BCA installation won't run
- II. BCA Setup error is displayed (page 34)
- III. SQL Server connection error is displayed (page 37)
- IV. SQL Server application error ("user instances disabled") is displayed (page 41)
- V. BCA software installs, but won't run (page 41)
- VI. BCA software runs, but does not allow data to be saved (page 42)
- VII. BCA software runs, but display of some screens is odd (for example, text and fields are partially obscured) (page 45)
- VIII. BCA runs, but slowly (page 47)

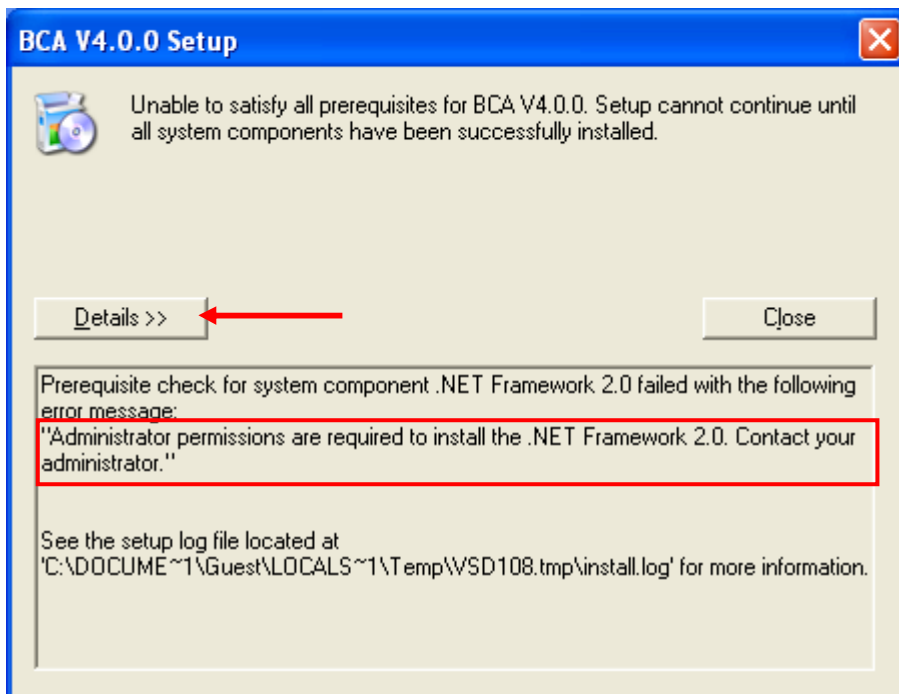
**NOTE: If you have any IT issues or questions during the installation process, or while running the BCA software, that are not successfully addressed by this document, please contact the BC Helpline at [bchelpline@dhs.gov](mailto:bchelpline@dhs.gov).** Please note that local configurations vary greatly, so you may need to enlist the help of your local IT support to install and run the software (for example, they may need to disable a firewall or change a security setting to perform the installation).

### **I. BCA installation won't run.**

If the system displays a message similar to the example below when you try to install the BCA software, you are not logged on with administrative privileges on your computer. Either log off and back on using a logon with administrative privileges, or have someone with full local administrative rights log in and perform the installation for you.



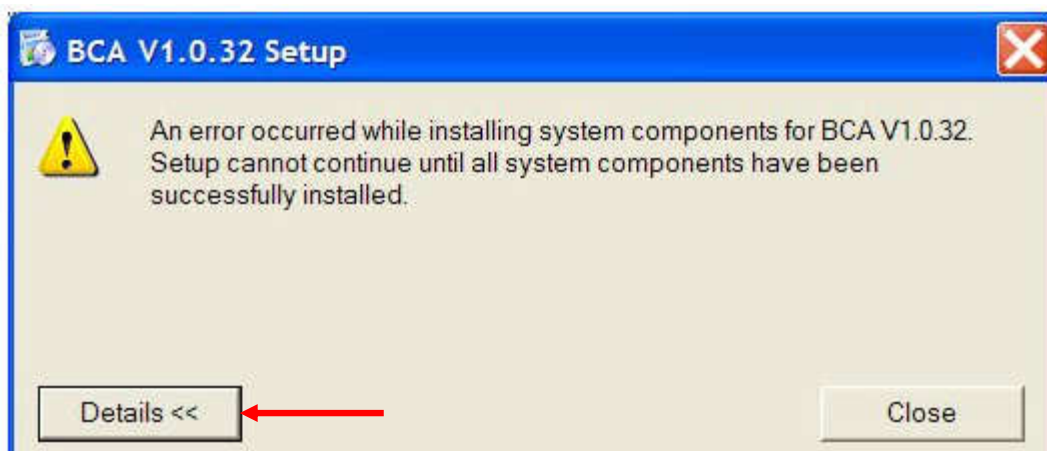
If the program displays an error indicating it is unable to satisfy the prerequisites, click the **Details** button for more information.



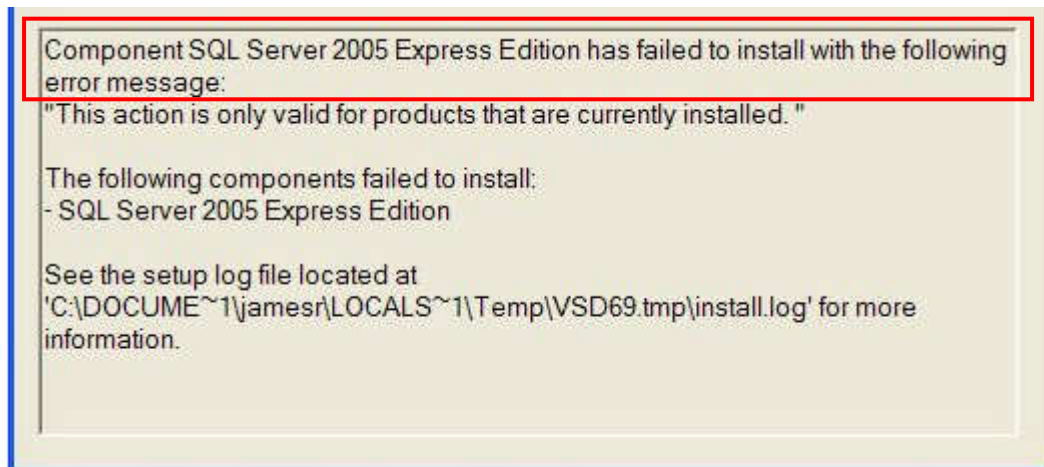
As the detailed explanation indicates, BCA cannot be installed because you are not logged on with administrative privileges on your computer. Either log off and back on using a logon with administrative privileges, or have someone with full local administrative rights log in and perform the installation for you.

## II. BCA Setup error is displayed.

If the program displays a setup error similar to the one shown below, click the **Details** button for more information.



In this example, SQL Server failed to install, as indicated by the boxed text:



1. To correct this problem, remove any SQL Server components that are shown in the list of currently installed programs on your computer. Also, remove MSXML if it is listed.

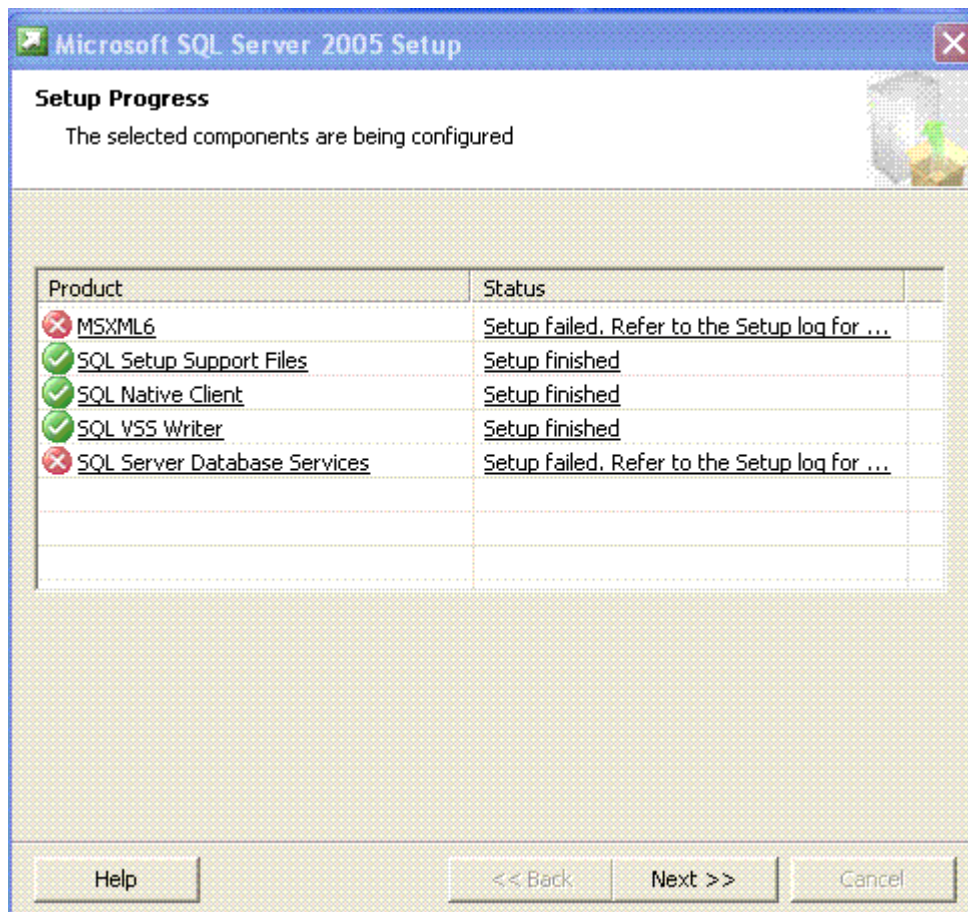


2. Next, download and install **Microsoft SQL Server 2005 Express Edition, Service Pack 2**, (SQLEXPRESS.EXE — 55.4 MB) from the Microsoft Web site:

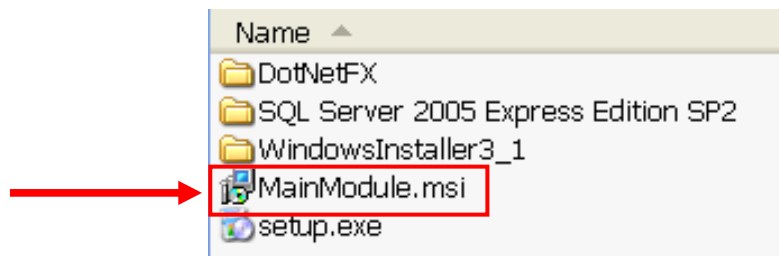
<http://www.microsoft.com/downloads/details.aspx?FamilyId=31711d5d-725c-4afa-9d65-e4465cdff1e7&displaylang=en>

Follow the installation instructions provided in this guide starting on page 5.

During the installation of SQL Server, you will see a status screen similar to the one shown below:



If all items in the Product column install successfully (indicated by check mark in green disc), restart the computer and install BCA again, but **do not** run **setup.exe**. Instead, double-click **MainModule.msi** so the installation program skips the SQL Express installation.



Review the installation steps on page 4, if necessary.

If any components failed setup (as MSXML6 and SQL Server Database Services did in the example above), you may need to run the cleanup utility shown below to uninstall conflicting components of previous versions of SQL Server and/or MSXML (you may want to contact your IT support center for assistance—they can review the installation log files to determine exactly what is causing the problem).

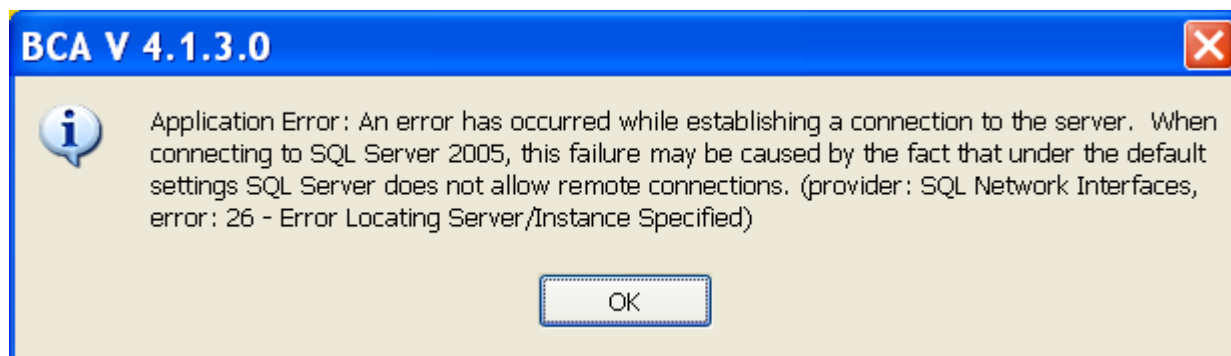
The cleanup utility is provided by Microsoft. The following links provide detailed information about the utility and instructions for downloading and running it:

<http://support.microsoft.com/kb/290301>  
<http://technet.microsoft.com/en-us/library/cc757604.aspx>

After running the cleanup program, restart the computer and reinstall the BCA software. If the SQL installation fails again, please contact your IT support center for further assistance.

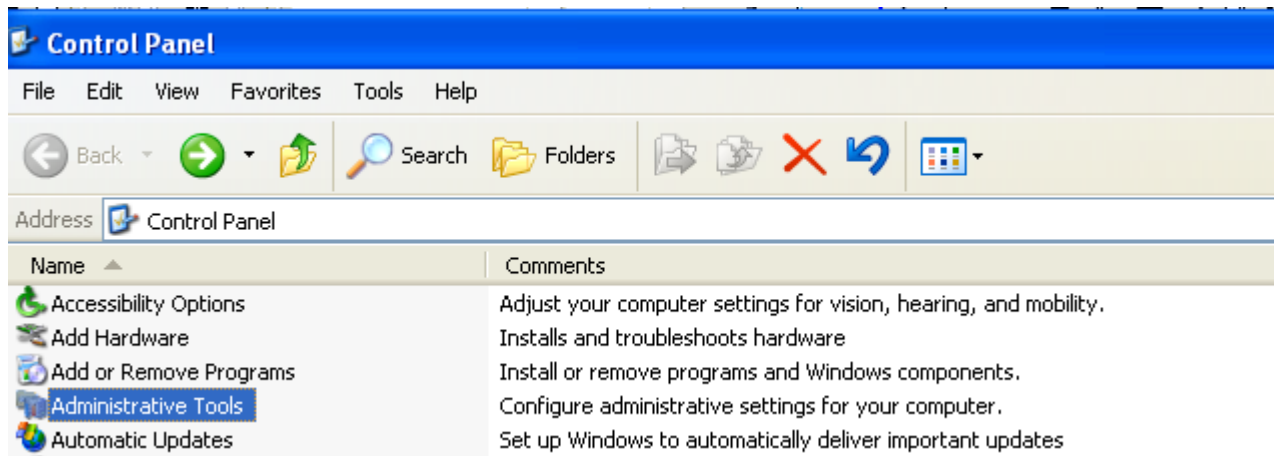
### III. SQL Server connection error is displayed.

If you get a SQL Server error similar to the one shown below, the SQL Server process may need to be restarted, or SQL Server may have been installed incorrectly:

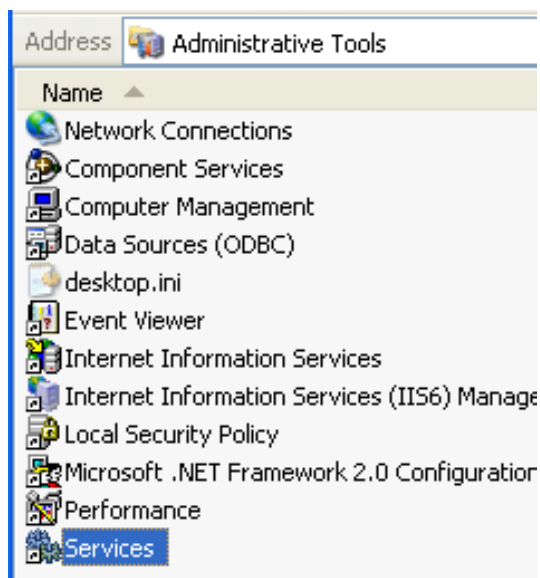


To restart SQL Server, follow these steps:

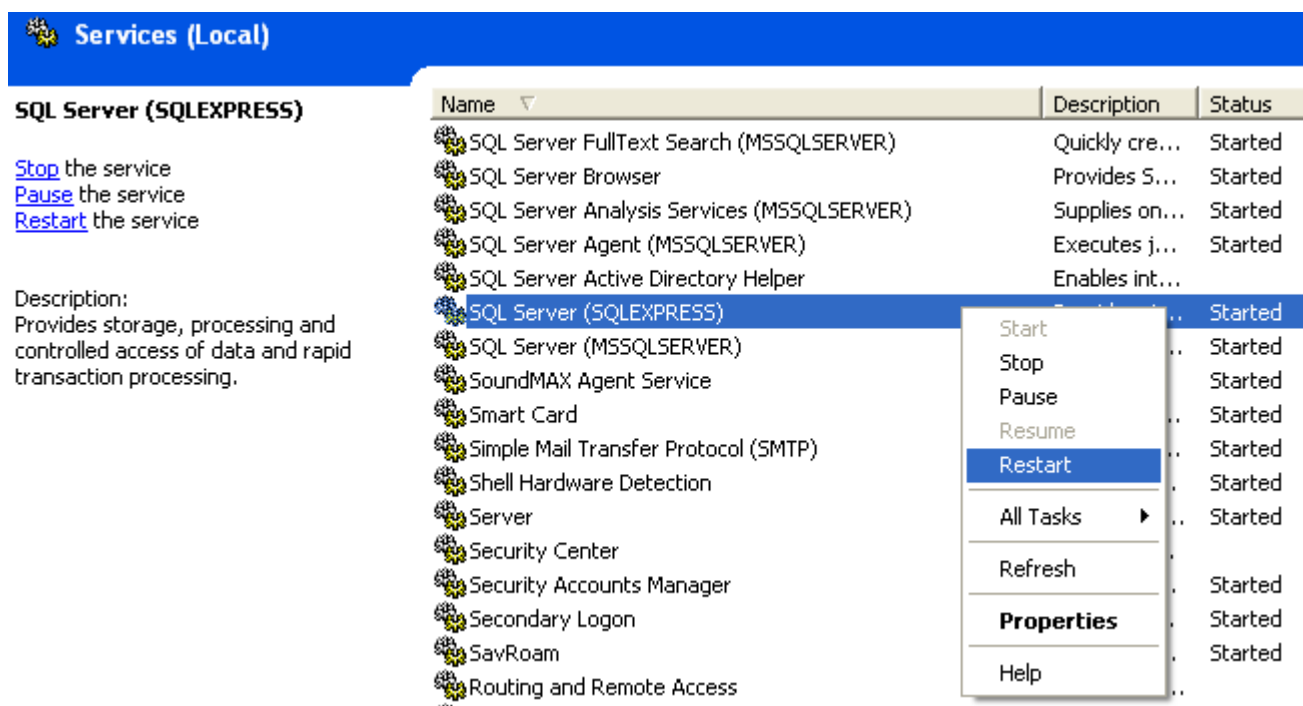
1. Go to the **Control Panel** and open **Administrative Tools**.



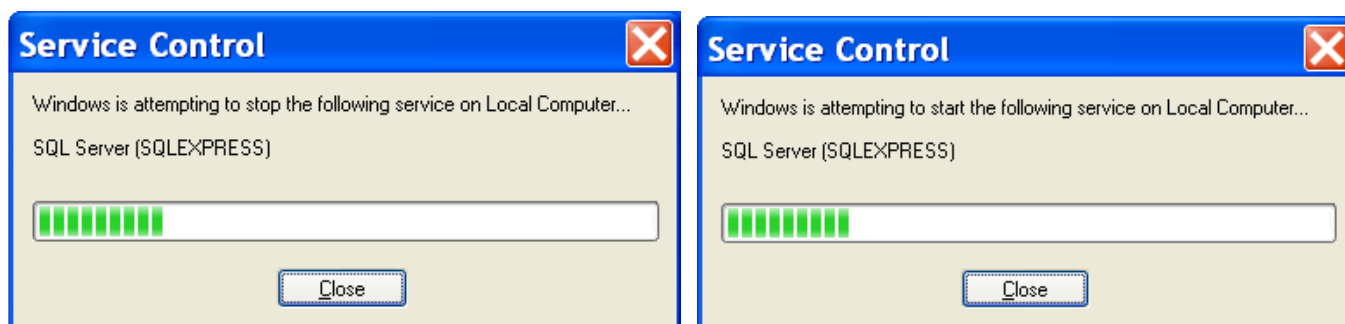
2. Click on **Services**.



- Find **SQL Server (SQLEXPRESS)** in the list. Right-click on it and select **Restart** (even if it indicates it is running).



You will see messages indicating the service is being stopped and started, as shown below:

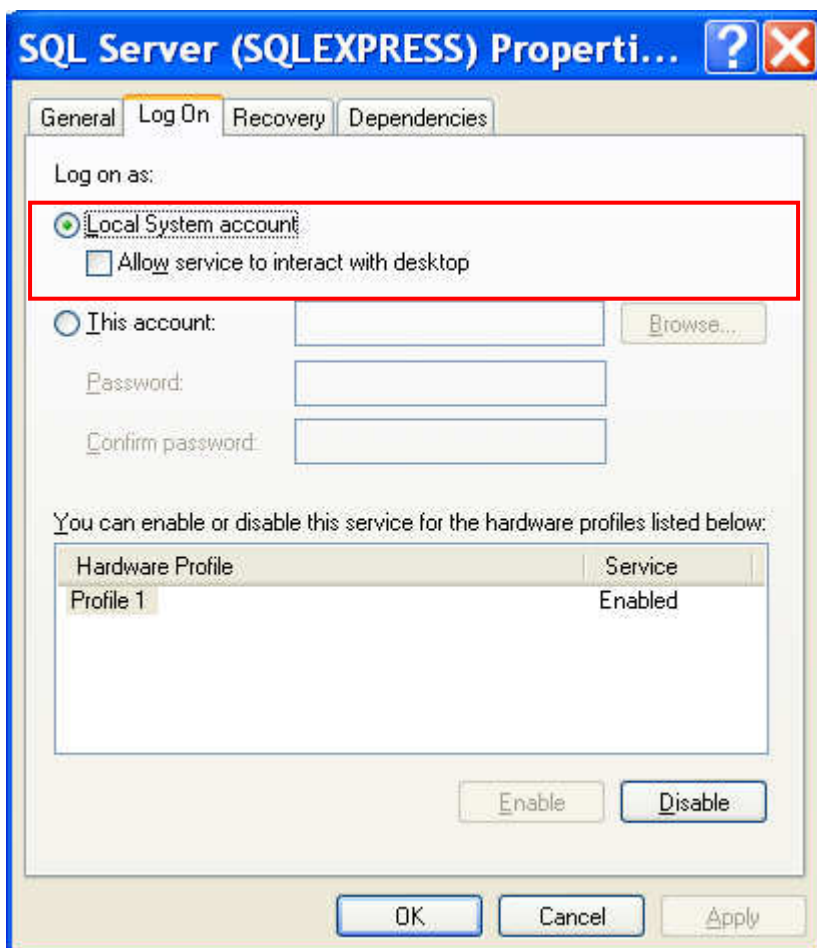
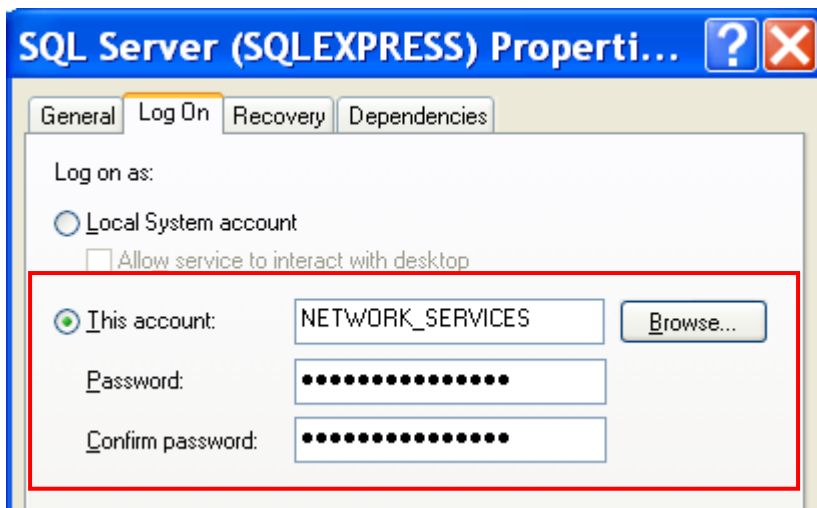


If SQL Server (SQLEXPRESS) is not shown on the list, it did not install successfully. Follow the instructions to download and install SQL Server Express starting on page 35.

- Try starting the BCA program again. If you still get a SQL Server error, go into Services and select SQL Server (SQLEXPRESS) as you did in steps 2 and 3. Right-click on SQL Server (SQLEXPRESS) and select **Properties**.



5. In the Properties window, click the Log On tab. If “This account” is selected, as shown in the first screen shot below, change it to “Local System account,” as shown in the second screen shot:



6. Click **Apply**; then click **OK**.
7. Start the BCA program again.



#### IV. SQL Server application error (“user instances disabled”) is displayed.

The BCA software installed and may even have run successfully previously, but now when you try to start it, you get the message displayed below:



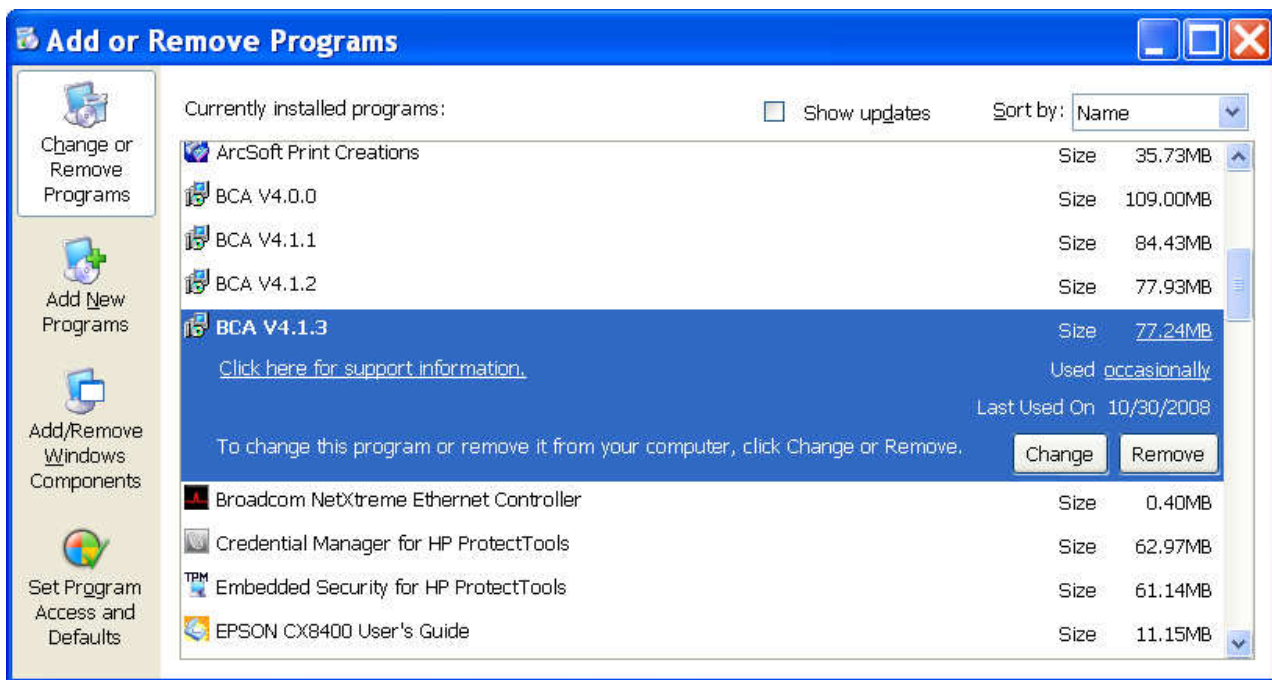
This message indicates something was changed in the configuration of SQL Server. This is typically caused by Microsoft patches or security updates. The solution is to uninstall SQL Server and its components, then download and reinstall SQL Server. These steps are provided in detail in section II, starting at step 1 (page 35).

#### V. BCA software installs, but won't run.

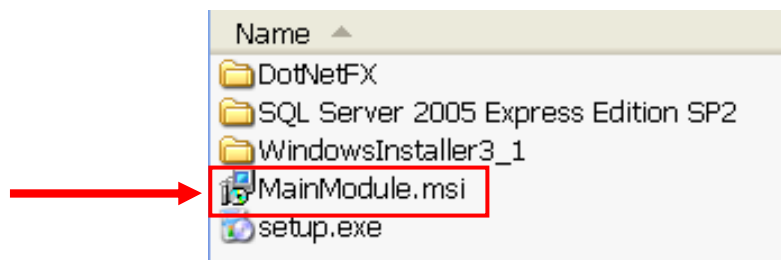
The BCA software installed successfully, but when you try to start it, you get the message displayed below:



1. This message indicates something is interfering with the startup of the BCA software, most likely the firewall on the computer. To correct this problem, disable your firewall. The steps will vary, depending on the firewall you have installed. Please consult the documentation for your firewall for instructions, or contact your local IT support for assistance. After you have disabled your firewall, uninstall and reinstall the BCA software as described in the following steps, then re-enable your firewall.
2. Select **BCA** from the list of currently installed programs and click **Remove**. Answer “Yes” to the prompt asking if you are sure you want to remove it from your computer.



3. Reinstall the BCA software only by double-clicking **MainModule.msi** so the installation program skips the SQL Express installation.



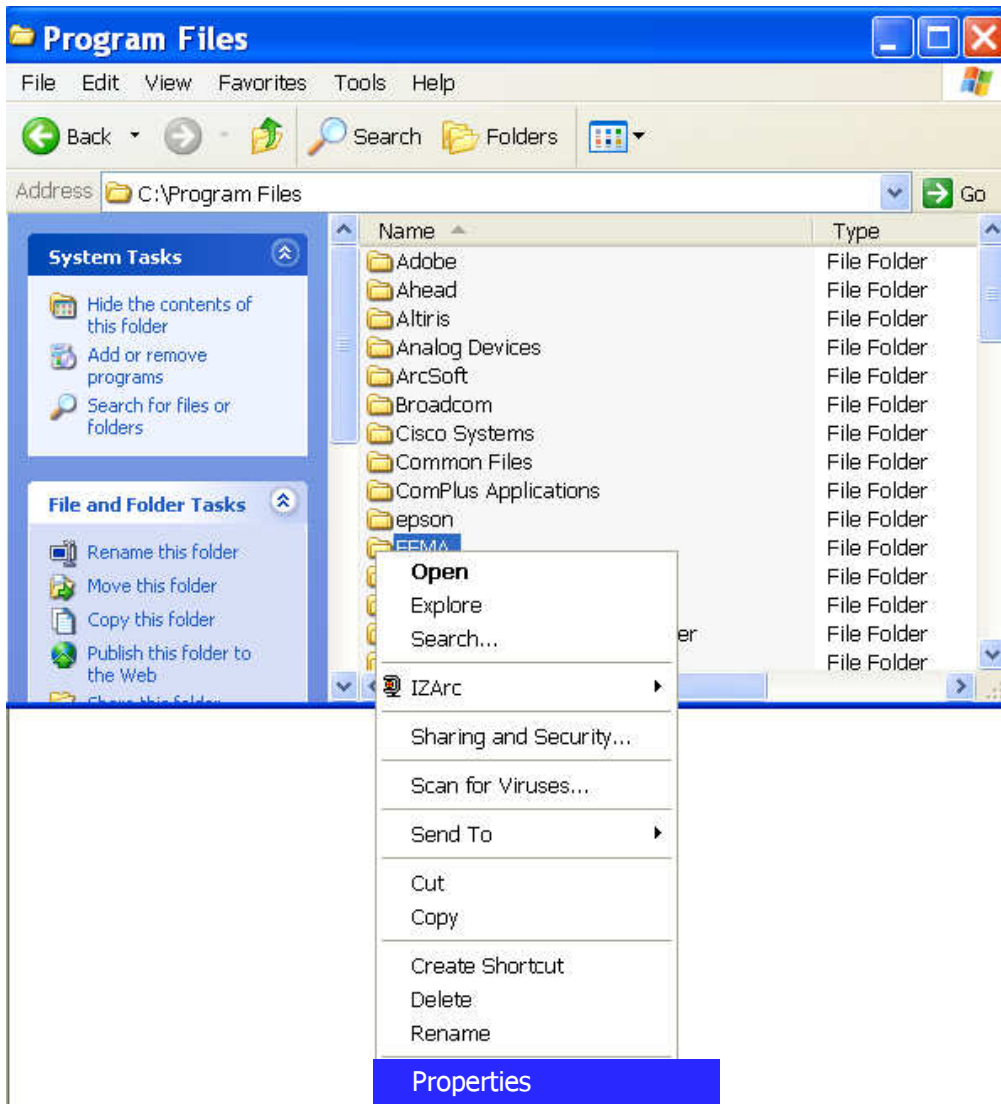
Review the installation steps on page 4, if necessary.

## VI. BCA software runs, but does not allow data to be saved.

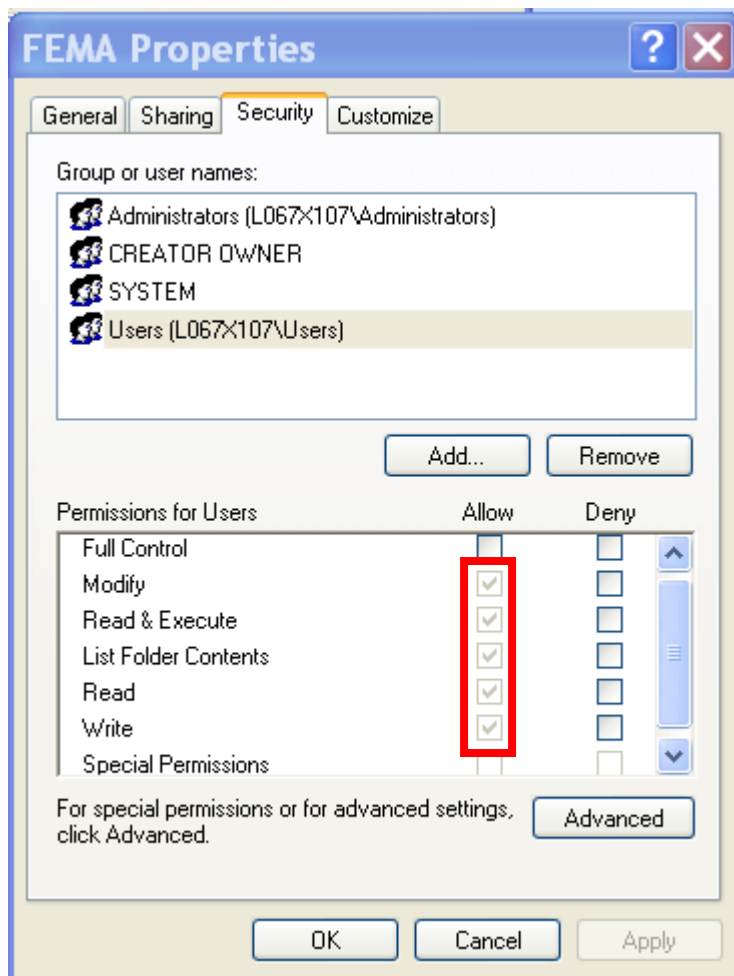
The BCA software runs, but when you try to save information, you get an error message similar to the following:



1. Locate the **FEMA** folder and right-click on it. (The default location for the FEMA folder depends on your operating system. If you are running XP, it is located in C:\Documents and Settings\All Users\Application Data; if you are running Vista, it is located in C:\ProgramData, unless another location was specified when the BCA software was installed.) Select **Properties**.



2. Click on the **Security** tab. Check the five Allow boxes under “Permissions for Users” as shown in the red box below. Click **Apply**; then click **OK**.



3. Try **saving** data in the BCA program again.

## VII. BCA software runs, but display of some screens is odd.

Screens that have text obscured, similar to the example below, may indicate a display problem.

Benefit Cost Analysis

Home Projects Structures Import/Export About

My Projects

My Projects  
Tipter Dry Detention  
Sawyer Street @ Witzel Av

PROJECT: Tipter Dry Detention, STRUCTURE: Sawyer Street @ Witzel Ave  
MITIGATION TYPE: Damage-Frequency Assessment - Drainage Improvement

STRUCTURE BCR: 0.00

COST ESTIMATION INFO

Project Useful Life (years) 50

Do you have a detailed Scope of work? Yes No

Mitigation Project Cost:

Annual Project Maintenance Cost:

Summary Of Cost Estimation

Check the box to enter a lump sum amount if you already have an estimate for the category. To develop an itemized estimate, click the category to link to items.

☐ Pre-Construction Costs

☐ Construction Costs

Does the estimate for Construction Costs include General Contractor costs and markups? Yes No

Construction Type: New Repair

☐ Construction Markups

☐ Annual Project Maintenance Costs

Number of Years of Maintenance 50

Present Worth of Annual Maintenance Costs \$

Does estimate reflect current prices? Yes No

Cost Basis Year: \$

Final Mitigation Project Cost \$

Justification/Documentation

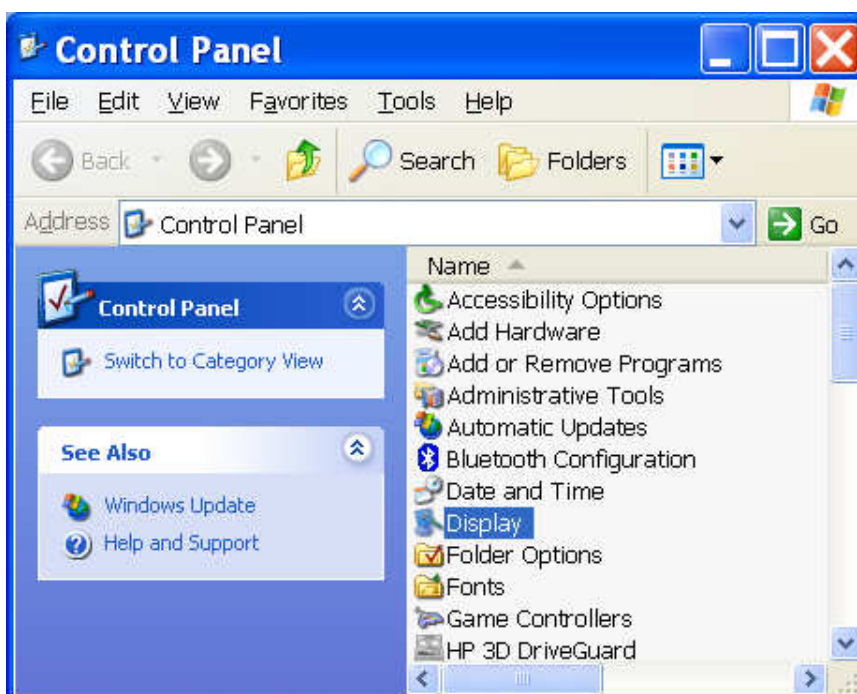
Justification Upload Documents

Justification for Field: Number of years of maintenance

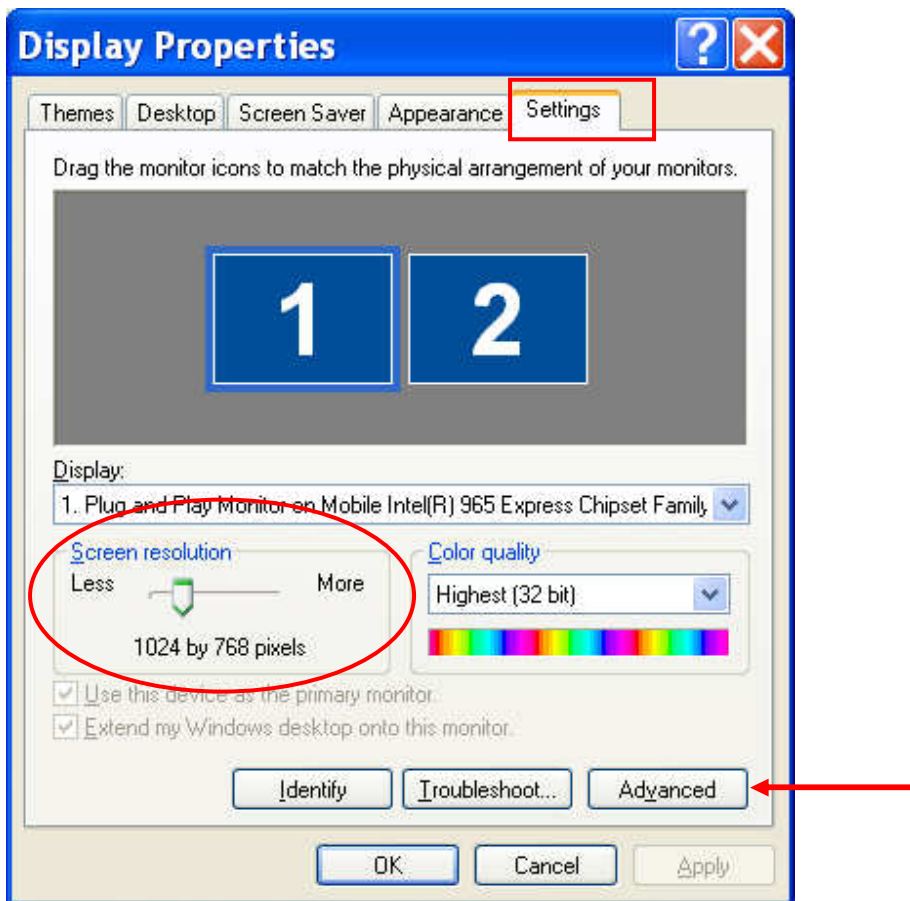
Save justification

Save and Go Back Save and Continue

1. Go to the **Control Panel** and open the **Display** folder.



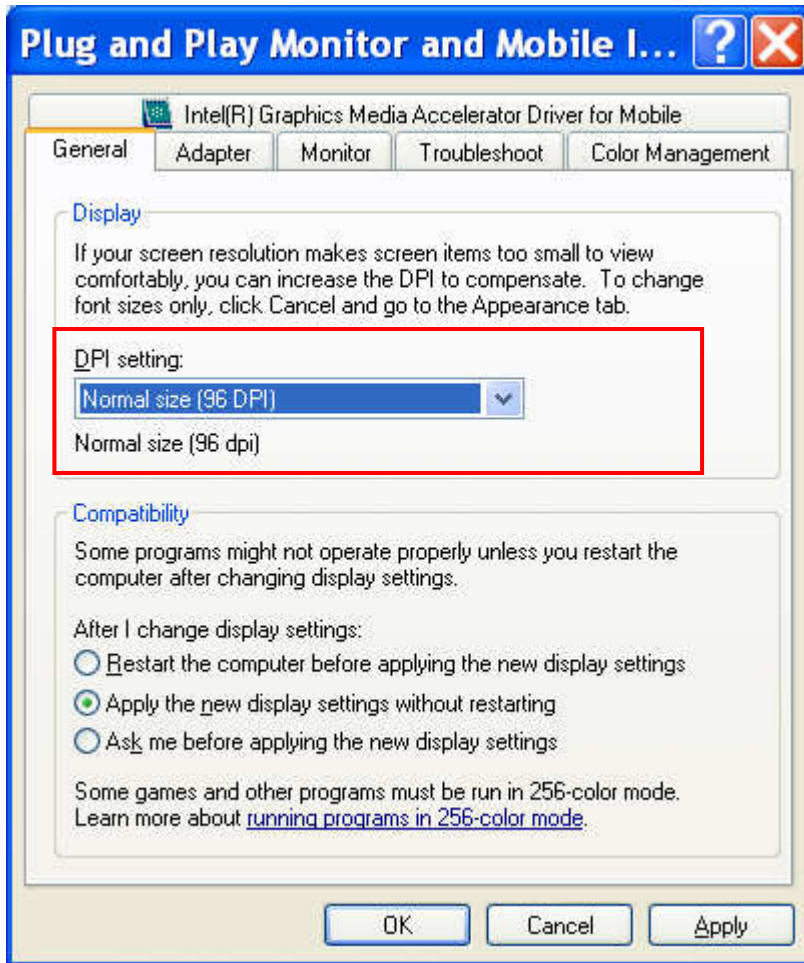
2. Click on the **Settings** tab and verify that screen resolution is at least 1024 by 768 pixels for best resolution.



Change settings if necessary and click **Apply**. Then click on the **Advanced** button.



3. Set DPI to Normal size. Click **Apply**; then click **OK**.



4. Run the BCA software again.

### VIII. BCA software runs, but slowly.

If the BCA software has been sitting idle for a while, the database connection has probably been closed due to lack of activity. The connection should be re-established automatically once you execute an action, such as opening a project. If the response time doesn't improve after a minute or two, close and restart the BCA software.

Any time you will be leaving the BCA software idle for an extended period of time (such as a lunch break or a meeting), shut the application down.

If the BCA software always runs slowly on your computer, the problem is most likely a lack of RAM (system memory). You need at least 1GB to run the BCA software, and 2GBs are recommended. Running other applications at the same time can overload system memory. Close as many other applications as possible to free up some system memory; response time should improve.